

HOOD CENTRAL APPRAISAL DISTRICT

REAPPRAISAL PLAN

2023-2024

# **Hood Central Appraisal District**

## **2023-2024 Reappraisal Plan**

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### **INTRODUCTION**

#### ***General Overview of Tax Code Requirement***

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

#### ***The Written Plan***

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

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

#### **Plan for Periodic Reappraisal**

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

- (a) Each appraisal office shall implement the plan for periodic reappraisal property approved by the board of directors under Section 6.05(i).
- (b) The plan shall provide for the following reappraisal activities for all real and personal property in the district at least once every three years:

**(1) Identifying properties to be appraised through physical inspection or by other reliable means of identification, including deeds or other legal documentation, aerial photographs, land-based photographs, surveys, maps, and property sketches:**

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

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

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

Maps have been developed for years that show ownership lines for all real estate. These GIS maps are stored digitally using software from ESRI, the industry leader of geographic software. Aerial photographs (aka-Pictometry) of the county were flown in January, 2021, which shows excellent detail of land and improvements as of that date. Also, change detection software flags those parcels that have changed since the 2013 flight. The maps are available to the appraisal district staff on their computer desktops, the district website ([hood-cad.org](http://hood-cad.org)), and to the general public in the public access area of the district.

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

(a) Real estate is physically reviewed every year. Appraisers drive to neighborhoods within the towns and cities of Hood County and gather data about each home, commercial business, or vacant land tract. The appraisers inspect each property noting the condition of the property and observing any changes to the property since the previous re-appraisal. Digital photos are captured for each account, and updated

depending on condition of the subject. Those pictures are stored in the CAMA system and assist the appraiser in making value decisions. Other stored data includes exterior sketch of the improvement which allows the computer to calculate square footage for the various areas of the building and components within the building such as bathrooms, fireplaces, A/C, roof type, exterior type, etc. Without permitting in the county, the change detection software flags the new construction, along with any changes made to any structure.

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

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

### **(3) Defining market areas in the district;**

(a) Each appraiser in the district is assigned a distinct market area. These areas are: Granbury, Tolar, and Lipan, overlapping areas of Glen Rose, Palo Pinto, Godley, and Bluff Dale. Annually, appraisers combine similar types of property into "neighborhoods". These neighborhoods have improvements that are of similar construction and type as well as similar years of construction. Market sales are examined to confirm which areas are similar. For apartments, commercial retail, wholesale, and service retail, the properties are categorized by market demand. Trade areas with similar rents, quality, and age are combined to analyze and apply sales and rental data.

Land is also put into regions or geoquads with other parcels having similar characteristics, school districts, and amenities. Using these geoquads, values are applied to all parcels using linear regression formulae. The regression formula take into consideration location, size, topography, and other characteristics that the market recognizes as significant.

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

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

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

Each improvement shows the sketch and dimensions, a digital photo of the improvement, the class which indicated original construction quality, the year of construction of each part of the improvement, the type of roof, the roof covering, the exterior covering of the improvement, number of bathrooms, fireplaces, A/C, and other attributes, and overall condition of the improvement.

**(5) Developing an appraisal model that reflects the relationship among the property characteristics affecting value in each market area and determines the contribution of individual property characteristics;**

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

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

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

Utilities, railroads and pipelines are individually appraised using the three approaches to value. The appraisal is a "unit appraisal" that looks at the entire company being appraised, the value is based on original cost less depreciation, net income to the company, and comparable sales if they exist. Then the value for each jurisdiction is set based on the amount of equipment, lines, or customers, within that jurisdiction.

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

(a) By utilizing sales data for each neighborhood, the appraiser measures accrued depreciation of structures by condition rating. Similar properties with similar condition are assigned values per square foot based on the linear regression formulae for that neighborhood. By utilizing the age, quality, condition, construction components, and other variables, the model is developed and applied to all parcels within the neighborhood.

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

**(7) Reviewing the appraisal results to determine value.**

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

Commercial property and apartments are compared by category or type of business. Office space structures are compared to other office spaces buildings. Adjustments are made in mass by the commercial appraisal staff utilizing the CAMA

system. All similar improvements are compared to verify reasonableness of value and equality.

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

### ***Scope of Responsibility***

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

The Hood Central Appraisal District (CAD) 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. The Board of Directors are appointed by the taxing units within the boundaries of Hood County and 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 Hood Central Appraisal District is responsible for local property tax appraisal and exemption administration for 8 jurisdictions or taxing units in Hood County. Each taxing unit, such as the county, a city, school district, etc., sets its own tax rate to generate revenue to pay for such things as police and fire protection, public school, road and street maintenance, courts, water and sewer systems, and other public services. Property appraisals and estimated values by the appraisal district allocate the year's tax burden on the basis of each taxable property's market value. We also determine 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.

The Hood Central Appraisal District serves the following taxing units:

Granbury ISD  
Tolar ISD  
Lipan ISD  
City of Granbury  
City of Tolar  
City of Lipan  
Hood County  
AMUD Defined Area

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

- Exposed for sale in the open market with a reasonable time for the seller to find a purchaser,
- Both the seller and the buyer know of all the uses and purposes to which the property is adapted and for which it is capable of being used and of the enforceable restrictions on its use, and:
- Both the seller and buyer seek to maximize their gains and neither is in a position to take advantage of the exigencies of the other.

The Texas Property Tax Code defines special appraisal provisions for the valuation of residential homestead property (Sec. 23.23), productivity (Sec. 23.411), and real property inventory (Sec. 23.12), dealer inventory (Sec. 23.121, 23.124, 23.1241 and 23.127), nominal (Sec. 23.18) or restricted use properties (Sec. 23.83) and allocations of interstate property (Sec. 23.03). The owner of business personal property inventory may elect to have the inventory appraised at its market value as of September 1<sup>st</sup> of the year preceding the tax year to which the appraisal applies by filing an application with the chief appraiser requesting that the inventory be appraised as of September 1<sup>st</sup> or on January 1<sup>st</sup> of the tax year without any application.

The Texas Property Tax Code, under Sec. 25.18, requires each appraisal office to implement a plan to update appraisal values for real property at least once every three years. **Hood Central Appraisal District’s current policy is to conduct a general reappraisal every year**, meaning that a property’s appraised value is established and reviewed for equality and uniformity every year. With changing market conditions, rapid growth in construction, and compliance with Property Tax Assistance Division of the State Comptroller’s Office annual review, the district’s management and Board of Directors feel that this is the only way to keep us current with the market.

The appraised value of real estate is calculated using specific information about each property. Using computer-assisted mass appraisal programs and recognized appraisal methods and techniques, we compare that information with the data for similar properties, and with recent cost and market data. The district follows the standards of the International Association of Assessing Officers (IAAO) regarding its appraisal practices and procedures, and subscribes to the standards promulgated by the Appraisal Foundation known as the Uniform Standards of Professional Appraisal Practice (USPAP) to the extent they are applicable.



## ***Personnel Resources***

The office of the Chief Appraiser is primarily responsible for overall planning, organizing, staffing, coordinating, and controlling of district operations. The administration department's function is to plan, organize, direct and control the business support functions related to human resources, budget, finance, records management, purchasing, fixed assets, facilities and postal services. The Appraisal department is responsible for the valuation of all real and personal property accounts. The property types appraised include commercial, residential, business personal, mineral, utilities, and industrial. The district utilizes outside contract professional services for our mineral, utilities, and industrial properties. The district's appraisers are subject to the provisions of the Property Taxation Professional Certification Act and must be duly registered with the Texas Department of Licensing and Regulation. Support functions including records maintenance, information and assistance to property owners, and hearings are coordinated by personnel in support service.

The appraisal district staff consists of 18 employees with the following classifications:

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

## ***Financial Resources***

The Hood Central Appraisal District is funded by the taxing entities served by the district. Budget allocations are calculated by adding the total of all calculated tax levies for the prior year and allocating to each entity a percentage of the total budget based on their percentage of the total calculated tax levies. Adequate funding is necessary to provide for completion of the requirements of the Texas Property Tax Code in a timely manner.

It is extremely important to provide competitive salary compensation and benefits in a very competitive job market. Getting and keeping quality personnel along with the education requirements makes retention an important factor in the district's operation. The expense of maintaining modern technology is also an important budget consideration that must be addressed each year. Computer technology changes rapidly, becomes obsolete, and unfriendly to the user if not properly updated. Loss of productivity and efficiency is a result of outdated technology. The district has been replacing/updating

technology every 2-3 years which allows us to keep up with change and keep productivity efficient.

### ***Staff Education and Training***

All personnel that are performing appraisal work are registered with the Texas Department of Licensing and Regulation and are required to take appraisal courses to achieve the status of Registered Professional Appraiser (RPA) after a minimum of 3 years of experience as an appraiser. After they are awarded their certification, they must receive additional training of a minimum of 30 hours of continuing education units every two (2) years. Failure to meet these minimum standards results in the termination of the employee.

Additionally, all appraisal personnel receive training in data gathering processes including data entry fieldwork and statistical analyses of all types of property to ensure equality and uniformity of appraisal of all types of property. Administrators for new appraisers deliver on-the-job training and management meets regularly with staff to introduce new procedures and regularly monitor appraisal activity to ensure that all personnel are following standardized appraisal procedures.

### ***Data***

The district is responsible for establishing and maintaining approximately 71,295 real property, personal property, industrial, utility, and mineral accounts covering 457 square miles within Hood County and several hundred square miles in adjoining overlap counties. Portions of adjoining counties are under overlapping taxing jurisdictions and these properties are included within this number of property accounts. These include overlapping jurisdictions from Parker, Johnson, Erath, Somervell and Palo Pinto Counties that enter into Hood County. Beginning in 2008 Hood County became responsible for all appraisals within Hood County. This data includes property characteristics, ownership, and exemption information. Property characteristic data on new construction is updated through an annual field effort; existing property data is maintained through a field review. Sales are routinely validated during a separate field effort, however numerous sales are validated as part of the new construction and field inspections. General trends in employment, interest rates, and new construction trends are acquired through various sources. Cost and market data is gathered by internally generated questionnaires to buyers and sellers, university research centers, market data centers, and vendor contacts.

The district has a mapping/deed department that maintains cadastral maps and various layers of data and aerial photography. The district's website ([hood-cad.org](http://hood-cad.org)) makes a

broad range of information available for public access, including information on the appraisal process, property characteristics data, certified values, protests and appeal procedures. Downloadable files of related tax information and district forms, including exemption applications and business personal property renditions are also available from Property Tax Division of the State Comptroller's website. The district also maintains current ownership of all properties by utilizing electronic data received from the Hood County Clerk's Office.

### ***Information Systems***

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

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

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

### ***Management Information Systems Support***

The Systems Administrator and the computer mapping department manage and maintain the district's data processing facility, software applications, internet website, and geographical information system. The district operates from ESRI Arcview server database with cooperation data sharing with County 911. The mainframe hardware/system software is Dell Poweredge T430 Server running on Windows 2012 with online backup solutions. HCAD has 25 desktop computers and 5 tablets. The GIS Mapping Server is a HP 3500 running on Windows 7. The user base is networked through the mainframe using Windows 2012 Server.

Southwest Data provides software services for appraisal and collections applications.

### ***Shared Appraisal District Boundaries***

The district established procedures whereby ownership and property data information are routinely exchanged within over-lapping jurisdictional boundaries. Appraisers from adjacent appraisal districts discuss data collection and valuation issues to minimize the possibility of differences in property characteristics, legal descriptions, and other administrative data. Under current State law, if a different method of developing values is not agreed upon by overlapping counties, the lower of the values is required to be used as the assessed value by all appraisal districts appraising the property.

### ***Independent Performance Test***

According to Chapter 5 of the Texas Property Tax Code and Section 403.302 of the Texas Government Code, the State Comptroller's Property Tax Assistance Division (PTAD) conducts an annual property value study (PVS) of each Texas school district and each appraisal district. As part of this annual study, the code requires the Comptroller to use sale 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 (MAPS review) test the validity of school district taxable values in each appraisal district and presume the appraisal roll value 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 representation and techniques or procedures of measuring uniformity.

This study utilizes statistical analyses of sold properties (sale ratio study) and appraisals of unsold properties (appraisal ratio study) as a basis for assessment ratio reporting. For appraisal districts, the reported measures include median level of appraisal, coefficient of dispersion (COD), the percentage of properties within 10% of the median, the percentage of properties within 25% of the median, and price-related differential (PRD) for properties overall and by state category.

There are six (6) independent school districts served by Hood CAD for which appraisal rolls are annually developed. The preliminary results of this study are released February 1 in the year following the year of appraisal. The final results of this study are certified to the Education Commissioner of the Texas Education Agency (TEA) the following July of each year. This outside (third party) ratio study provides additional assistance to the CAD in determining areas of market activity or changing market conditions.

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## Appraisal Activities

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### INTRODUCTION

#### *Appraisal Responsibilities*

This field appraisal staff is responsible for collecting and maintaining property characteristic data for classification, valuation, and other purposes. Accurate valuation of real and personal property by any method requires a comprehensive physical description of personal property, and land and building characteristics. This appraisal staff 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 Hood County and the jurisdictions of this appraisal district. The data collection effort involves the field inspection of real and personal property accounts, as well as data entry of all data collected into the existing information system. The goal is to 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 7 appraisers
- **Data** – The data used by field appraisers includes the existing property characteristic information contained in **CAMA** (Computer Assisted Mass Appraisal System) from the district's computer system. The data is downloaded in tablets for review. Other data used includes maps, sales data, fire and damage reports, building permits, photos and actual cost and market information. Sources of information are gathered using excellent reciprocal relationships with other participants in the real estate market place. The district cultivates sources and gathers information from both buyers and sellers participating in the real estate market.

## ***Appraisal Frequency and Method Summary***

- **Residential Property** – Residential property is physically viewed every year with appraisers driving along public and private roadways in front of each home, noting condition of the improvement and looking for changes that might have occurred to the property since the last on-site check. In some subdivisions where change of condition is frequent, homes are examined more closely. Exterior pictures are taken of homes as changes occur. Every subdivision is statistically analyzed annually to ensure that sales that have occurred in the subdivision during the past 12 months are within a +/-5% range of appraised value. If the sales do not indicate that range, adjustments are made to the subdivision using a process outlined in detail in the Residential Appraisal section of this report.
- **Commercial Property** – Commercial and industrial real estate is observed annually to verify class and condition. The inspection occurs in addition to Business Personal Property appraisers checking BPP accounts. Pictures are taken of the improvements as changes occur. Real estate accounts are analyzed against sales of similar properties in Hood CAD as well as similar communities in North Texas that have similar economies. The income approach to value is also utilized to appraise larger valued commercial properties such as shopping centers, apartment complexes, office buildings, restaurants, motels and hotels, and other types of property that typically sell based on net operating income.
- **Business Personal Property** – Business personal property is observed annually with appraisers actually going into businesses to develop quality and density observations. A rendition is left for new businesses to complete. Similar businesses to a subject are analyzed annually to determine consistency of appraisal per square foot. Businesses are categorized using SIC codes. Rendition laws provide additional information on which to base values of all BPP accounts
- **Minerals** – Working and royalty interests of producing oil and gas wells are appraised annually by Pritchard & Abbott. The most recent production data available from the Texas Railroad Commission is downloaded into appraisal software that estimates economically recoverable reserves. Those reserves are then based upon State mandated pricing using the previous year's average of oil or gas values. A discount rate 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 the division orders. Minerals are contracted out to Pritchard & Abbott.

- **Utilities and Pipelines** – Utility companies and pipelines are appraised annually using a unit value developed using all three approaches to value. For example, a utility company's total value in the State is estimated using cost, market, and income approaches to value and then the entire value is allocated using the components of that utility company that have situs in the various tax units of Hood CAD. Components include such things as miles of distribution lines, substations and the like for an electric utility. Utilities and pipelines are also contracted out to Pritchard & Abbott.

## **PRELIMINARY ANALYSIS**

### ***Data Collection/Validation***

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

The listing procedure utilized by the field appraisers is available in the district offices. Appraisers periodically update the classification system with input from the valuation group.

### **Sources of Data**

The sources of data collection are through property inspection, new construction field effort, data review/review field effort, data mailer questionnaires, hearings, sales validation field effort, commercial sales verification and field effort,

newspapers and publications, and property owner correspondence by mail or via the internet. A principal source of data comes from building permits received from taxing jurisdictions that require property owners to take out a building permit. Otherwise, paper permits are received and matched manually with the property's tax account number for data entry. The Multiple Listing Service of the Granbury Board of Realtors is a reliable source of data, for both property description and market sales data. Area and regional real estate brokers and managers are also sources of market and property information. Data surveys of property owners requesting market information and property description information is also valuable data. Soil surveys and agricultural surveys of farming and ranching property owner and industry professionals are helpful for productivity value calibration. The Texas Railroad Commission is the source for mineral production data and leasing information. Capital market information is available from Ibbotson's Valuation Edition, Wall Street Journal, Value Line Investment Survey, and the Oil and Gas Journal. Improvement cost information is gathered from local building contractors and Marshall and Swift Valuation Service. (Various income and rental surveys are performed by interviewing property managers and operators to determine operating income and expenses for investment and income producing real property.)

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

Property owners are one of the best sources for identifying incorrect data that generates a field check. Frequently, the property owner provides reliable data to allow correction of records without having to send an appraiser on-site. As the district has increased the amount of information available on the Internet, property owners have the opportunity to review information on their property and forward corrections via e-mail.

For the property owner without access to the Internet, letters are sometimes submitted notifying the district of inaccurate data. Properties identified in this manner are added to a work file and inspected at the earliest opportunity. Accuracy and validity in property descriptions and characteristics date is the highest goal and is stressed throughout the appraisal process from year to year. Appraisal opinion quality and validity relies on data accuracy as its foundation.



### ***Data Collection Procedures***

The appraisers are assigned specific areas throughout the district to conduct field inspections. These geographic areas of assignment generally follow sector boundary lines and are maintained for several years to enable the appraiser assigned to that area to become knowledgeable of all the factors that drive values for that specific area. Appraisers of real estate and business personal property conduct field inspections and record information using electronic field devices that hold all data dealing with the property and allows for the entry of corrections and additions that the appraiser may find in his or her field inspection.

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

### ***Data Maintenance***

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

## **INDIVIDUAL VALUE REVIEW PROCEDURES**

### ***Field Reviews***

The date of last inspection and the CAD appraiser responsible are listed on the CAMA record. If a property owner or jurisdiction disputes the district’s records concerning this data during a hearing, via a telephone call or other correspondence received, the record may be corrected based on the evidence provided or an on-

site inspection may be conducted. Typically, a field inspection is requested to verify this information for the current year's valuation or for the next year's valuation. Every year a field review of real property located in certain areas or neighborhoods in the jurisdiction is done during the data review/re-list field effort. A field review is performed on all personal property accounts to confirm taxable situs each year.

### ***Office Review***

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

### ***Performance Testing***

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 sold property to appraised property forms the basis for determining the level of appraisal and market influences and factors for the neighborhood. The information is the basis for updating property valuation for the entire area of property to be evaluated. Field appraisers, in many cases, may conduct field inspections to ensure the accuracy of the property descriptions at the time of sale for this study. This inspection is to ensure that the ratios produced are accurate for the property sold and that appraised values utilized in the study are based on accurate property data characteristics observed at the time of sale. Also, property inspections are performed to discover if property characteristics have 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.

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## Residential Valuation Process

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### INTRODUCTION

#### *Scope of Responsibility*

The residential appraisers are responsible for estimating equal and uniform market values for residential improved and vacant property. There are approximately 31,500 residential improved single and multiple family parcels and 12,000 vacant residential properties in Hood County.

#### *Appraisal Resources*

- **Personnel** – The residential appraisal staff consists of 7 appraisers and 1 appraisal clerk and 1 appraisal director. The following appraisers are responsible for estimating the market value of residential property: Paula Clements, Kelley Montgomery, David Eatherly, Steve McCoy, Leighann Bererra, Julie Rhoden, Donna Wood, and Christina Brawner.
- **Data** – An individual set of data characteristics for each residential dwelling and multiple family units in this district are collected in the field and data entered into the computer. The property characteristic data drives the application of computer-assisted mass appraisal (CAMA) under the Cost, Market, and Income Approaches to property valuation.

### VALUATION APPROACH

#### *Land Analysis*

Residential land valuation analysis is conducted prior to neighborhood sales analysis. The value of the land component to the property is estimated based on available market sales for comparable and competing land under similar usage. A comparison and

analysis of comparable land sales is conducted based on a comparison of land characteristics found to influence the market price of land located in the neighborhood. A computerized land table file stores the land information required to consistently value individual parcels within neighborhoods given known land characteristics. Specific land influences are considered, where necessary, and depending on neighborhood and individual lot or tract characteristics, to adjust parcels outside the neighborhood norm for such factors as access, view, shape, size and topography. The appraisers use abstraction and allocation methods to ensure that estimated land values best reflect the contributory market value of the land to the overall property value.

### ***Area Analysis***

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

While the development of neighborhoods and their market analysis is described under Neighborhood and Market Analysis, some of the general market areas for Hood County are as follows: Granbury, Tolar, Lipan, Bluff Dale, Glen Rose and Godley ISDs.

### ***Neighborhood and Market Analysis***

Neighborhood and analysis involves the examination of how physical, economic, governmental and social forces and other influences affect property values. The effects of these forces are also used to identify, classify, and stratify comparable properties into smaller, manageable subsets of the universe of properties known as neighborhoods. Residential valuation and neighborhood analysis is conducted on various market areas within each of the political entities known as Independent School Districts (ISD). Analysis of comparable market sales forms the basis of estimating market activity and the level of supply and demand affecting market prices for any given market area, neighborhood or district. Market sales indicate the effects of these market forces and are interpreted by the appraiser into an indication of market price ranges and indications of property component change considering a given time period relative to the date of appraisal. Cost and Market Approaches to estimate value are the basic techniques utilized to interpret these sales. For multiple family properties the Income Approach to value is also utilized to estimate an opinion of value for investment level residential property.

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

As new neighborhoods in a community are developed, they compete with existing neighborhoods. An added supply of new homes tends to induce population shift from older homes to new homes. In the period of stability, or equilibrium, the forces of supply and demand are about equal. Generally, in the state of equilibrium, older neighborhoods can be more desirable due to their stability of residential character and proximity to the work place 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, rebuilding, reorganization, or restoration, which promotes increased demand and economic desirability.

Neighborhood identification and delineation is the cornerstone of the residential valuation system at the district. 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.

See Appendix A for a complete list of market areas.

### ***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 with ongoing change; 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. It may be determined in a transition area that older, non-remodeled homes are economic mis-improvements, and the highest and best use of such property is the construction of new dwellings or value of the land only.

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 on a select population of properties. In some areas of residential to commercial transition the highest and best use may be vacant land only.

## **VALUATION AND STATISTICAL ANALYSIS (Model Calibration)**

### ***Cost Schedules***

All residential parcels in the district are valued with a replacement cost estimated from identical cost schedules based on the improvement classification system using a comparative unit method. The district's residential cost schedules are estimated from Marshall and Swift, a nationally recognized cost estimator service. These cost estimates are compared with sales of new improvements and evaluation 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 smaller market area based on evidence taken from a sample of market sales. The cost schedules are reviewed annually as a result of recent state legislation requiring that the appraisal district cost schedules be within a range of plus or minus 10% from nationally recognized cost schedules.

A review of the residential cost schedule is performed annually. As part of this review and evaluation process of the estimated replacement cost, newly constructed sold properties representing various levels of quality of construction in the district are considered. The property data characteristics of these properties are verified and photographs are taken of the samples. CAD replacement costs are compared against Marshall and 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 estimates and is used to adjust the district's cost schedule to be in compliance with local building costs as reflected by the local market.

A sales file for the storage of "snapshot" 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, and protest hearings, Board of Realtor's MLS, various sale vendors, builders, and realtors. A system of type, source, validity and verification codes has been established to define salient facts related to a property's purchase or transfer and to help determine relevant market sale prices.

The effect of time as an influence on price was considered by paired comparison and applied in the ratio study to the sales as indicated within each neighborhood area. Neighborhood sales reports are generated as an analysis tool for the appraiser in the development and estimation of market price ranges and property component value estimates. Monthly time adjustments are estimated based on comparative analysis using paired comparison of sold property. Sales of the same property were considered and analyzed for any indication of price change attributed to a time change or influence. Property characteristics, financing, and conditions of sale were compared for each property sold in the pairing of property to isolate only the time factor as an influence on price.

Abstraction and allocation of property components based on sales of similar property is an important analysis tool to interpret market sales under the cost and market approaches to value. These analysis tools help determine and estimate the effects of change, with regard to price, as indicated by sale prices for similar property within the current market.

### ***Statistical Analysis***

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

The appraiser, through the sales ratio analysis process, reviews every neighborhood annually. The first phase involved neighborhood ratio studies that compare the recent sales prices of neighborhood properties to the appraised values of these sold properties. This set of ratio studies affords the appraiser an excellent means of judging the present level of appraised value and uniformity of the sales. The appraiser, based on the sales ratio statistics and designated parameters for valuation update, makes a preliminary decision as to whether the value level in a neighborhood is at an acceptable level.

### ***Market and Cost Reconciliation and Valuation***

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

The following equation denotes the hybrid model used:

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

Whereas, in accordance with the cost approach, the estimated market value (MV) of the property equals the land value (LV) plus the replacement cost new of property improvements (RCN) less accrued depreciation (AD). As the cost approach separately estimates both land and building contributory values and uses depreciated replacement costs, which reflect only the supply side of the market, it is expected that adjustments to the cost values may be needed to bring the level of appraisal to an acceptable standard as indicated by market sales. Thus, demand side economic factors and influences may be observed and considered. These market, or location adjustments, may be abstracted and applied uniformly within neighborhoods to account for location variances between



market areas or across a jurisdiction. Whereas, in accordance with the Market Approach, the estimated market value (MV) of the property equals the basic unit of property under comparison, times the market price range per unit for sale of comparable property. For residential property, the unit of comparison is typically the price per square foot of living area or the price indicated for the improvement contribution. This analysis for the hybrid model is based on both the cost and market approaches as a correlation of indications of property valuation. A significant unknown for these two indicators of value is determined to be the rate of change for the improvement contribution to total property value. The measure of change for this property component can best be reflected and based in the annualized accrued depreciation rate. This cost related factor is most appropriately measured by sales of similar property. The market approach, when improvements are abstracted from the sale price, indicates the depreciated value of the improvement component, in effect, measuring changes in accrued depreciation which is a cost factor. The level of improvement contribution to the property is measured by abstraction of comparable market sales, which is the property sale price less land value. The primary unknown for the cost approach is to accurately measure accrued depreciation affecting the amount of loss attributed to the improvements as age increases and condition changes. This evaluation of cost results in the depreciated value of the improvement component based on age and condition.

The evaluation of this market and cost information is the basis of reconciliation and indication of property valuation under this hybrid model.

When the appraiser reviews a neighborhood, the appraiser reviews and evaluates a ratio study that compares recent sales prices of properties, appropriately adjusted for the effects of time, within a delineated neighborhood, with the value of the properties based on the estimated depreciated replacement cost of improvements plus land value. The calculated ratio derived from the sum of the sold properties' estimated value divided by the sum of the time adjusted sales prices indicated the neighborhood level of appraisal based on sold properties. This ratio is compared to the acceptable appraisal ratio, 95% to 105%, 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 is made.

If the reappraisal of the neighborhood is indicated, the appraiser analyses available market sales, appropriately adjusted for the apparent effects of time, by market abstraction of property components. This abstraction of property components allows the appraiser to focus on the rate of change for the improvement contribution to the property by providing a basis for calculating accrued depreciation attributed to the improvement component. This impact on value is the most significant factor affecting property value and the most important unknown to determine by market analysis. Abstraction of the improvement component from the adjusted sale price for a property indicates the effect of overall market suggested influences and factors on the price of improvements that were

a part of this property, recently sold. Comparing this indicated price or value allocation for the improvement with the estimated replacement cost new of the improvement indicates any loss in value due to accrued forms of physical functional, or economic obsolescence. This is a market driven measure of accrued depreciation and results in a true and relevant measure of improvement marketability, particularly when based on multiple sales that indicate the trending of this rate of change over certain classes of improvements within certain neighborhoods. Based on this market analysis, the appraiser estimates the annual rate of depreciation for given improvement descriptions considering age and observed condition. Once estimated, the appraiser recalculates the improvement value of all property within the sale sample to consider and review the effects on the neighborhood sale ratio. After an acceptable level of appraisal is achieved within the sale sample, the entire neighborhood of property is recalculated utilizing the indicated depreciation rates taken from market sales. This depreciation factor is the basis for trending all improvement values and when combined with any other site improvement 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. Based on analysis of recent sales located within a given neighborhood, estimated property values will reflect the market influences and conditions only for the specified neighborhood, thus producing more representative and supportable values.

The estimated property values calculated for each updated neighborhood are based on market indicated factors applied uniformly to all properties within a neighborhood. 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 (assessed value) of a qualified residence homestead will be the LESSER of

- The Market value, or
- The preceding year’s appraised value

PLUS 10 percent 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 1<sup>st</sup> 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.

Beginning in 2010, Texas Property Tax Code Section 23.01 was amended to require that the market value of a residence homestead be determined solely on the basis of the current use of the property regardless of its highest and best use.

## **INDIVIDUAL VALUE REVIEW PROCEDURES**

### ***Field Review***

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

As the district's parcel count has increased through new home construction, and the homes constructed in the boom years of the late 70's and early 80's experience remodeling, the appraisers are required to perform the field activity associated with transitioning and high demand neighborhoods. Increased sales activity has also resulted in a more substantial field effort on the part of the appraisers to review and resolve sales outliers. Additionally, the appraiser frequently field reviews subjective data items such as quality of construction, condition, and physical, functional and economic obsolescence factors contributing significantly to the market value of the property. After preliminary estimates of value have been determined in targeted areas, the appraiser takes valuation documents to the field to test the computer-assisted values against his own appraisal judgment. During this review, the appraiser 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 produced meet the standards of accuracy in several ways. Overall sales ratios are generated for each neighborhood to allow the appraiser to review general market trends within their area of responsibility, and provide an indication of market appreciation over a specified period 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 appraisal manager and the Chief Appraiser for final review and approval. This review includes comparison of level of value between related neighborhoods within and across jurisdiction lines. The primary objective of this review is to ensure that the proposed values have met present appraisal guidelines appropriate for the tax year in question.

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## Commercial and Industrial Property Valuation Process

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### INTRODUCTION

#### *Appraisal Responsibility*

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

#### *Appraisal Resources*

**Personnel** – The improved real property appraisal responsibilities are categorized according to major property types of multi-family or apartment, office, retail, warehouse and special use (i.e. hotels, hospitals, and nursing homes). One (1) appraiser is assigned to improved commercial property types and the industrial properties are contracted out.

**Data** – The data used by the commercial appraisers includes verified sales of vacant land and improved properties and the pertinent data obtained from each (sales price levels, capitalization rates, income multipliers, equity divided rates, marketing period, etc.). Other data used by the appraisers includes actual income and expense data (typically obtained through the hearings process), actual contract rental data, leasing information (commissions, tenant finish, length of terms, etc.), and actual construction cost data. In addition to the actual data

obtained from specific properties, market data publications are also reviewed to provide additional support for market trends.

## **PRELIMINARY ANALYSIS**

### ***Market Study***

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

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

## **VALUATION APPROACH**

### ***Land Value***

Commercial land is analyzed annually to compare appraised values with recent sales of land in the market area. If appraised values differ from sales prices being paid, adjustments are made to all land in that region. Generally, commercial property is appraised on a price per square foot basis. Factors are placed on individual properties based on corner influence, depth of site, shape of site, easements across site, and other

factors that may influence value. The land is valued as though vacant at the highest and best use.

### ***Area Analysis***

Area data on regional economic forces such as demographic patterns, regional location factors, employment and income patterns, general trends in real property prices and rents, and 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 commercial and industrial properties these subsets of a universe of properties are generally referred to as market areas, neighborhoods, or economic areas.

Economic areas are defined by each of the improved property use types (apartment, office, retail, warehouse and special use) based upon an analysis of similar economic or market forces. These include, but are not limited to, similarities of rental rates, classification of projects (known as building class by area commercial market experts), date of construction, overall market activity or other pertinent influences. Economic area identification and delineation by each major property use type is the benchmark of the commercial valuation system. All income model valuation (income approach to value estimates) is economic area specific. Economic areas are periodically reviewed to determine if re-delineation is required. The geographic boundaries as well as income, occupancy and expense levels and capitalization rates by age within each economic area for all commercial use types and its corresponding income model have been estimates 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 and uses. Improved properties reflect a wide variety of highest and best uses which include, but are not limited to: office, retail, apartment, warehouse, light industrial special purpose, or interim uses. In many instances, the property's current use is the same as its highest and best use. This analysis insures that an accurate estimate of market value (sometimes referred to as value in exchange) is derived.

On the other hand, value in use represents the value of a property to a specific user for a specific purpose. This perspective for value may be significantly different than market value, which approximates market price under the following assumption: (1) no coercion of undue influence over the buyer or seller in an attempt to force the purchase or sale, (2) well-informed buyers and sellers acting in their own best interest, (3) a reasonable time for the transaction to take place, and (4) payment in cash or its equivalent.

## ***Market Analysis***

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

## **DATA COLLECTION/VALIDATION**

### ***Data Collection Manuals***



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

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

### ***Sources of Data***

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

Model calibration involves the process of periodically adjusting the mass appraisal formula, tables and schedules to reflect current local market conditions. Once the models have undergone the specification process, adjustments can be made to reflect new construction procedures, materials and/or costs, which can vary from year to year. The basic structure of a mass appraisal model can be valid over an extended period of time, with trending factors utilized for updating the data to the current market conditions.

However, at some point, if the adjustment process becomes too involved, the model calibration technique can mandate new model specification or a revised model structure.

### ***Cost Schedules***

The cost approach to value is applied to improved real property utilizing the comparative unit method. This methodology involves the utilization of national cost data reporting services as well as actual cost information on local comparable properties whenever possible. Cost models are typically developed based on the Marshall Valuation Service which indicates estimated hard or direct costs of various improvement types.

Cost models include the derivation of replacement cost new (RCN) of all improvements represented within the district. These include comparative base rates, per unit adjustments and lump sum adjustments for variations in property description, design, and types of improvement construction. This approach and analysis also employs the sales comparison approach to the evaluation of soft or indirect costs of construction. Evaluating market sales of newly developed improved property is an important part of understanding total replacement cost of improvements. What total costs may be involved in the development of the property, as well as any portion of cost attributed to entrepreneurial profit can only be revealed by market analysis of pricing acceptance levels. In addition, market related land valuation for the underlying land value is important in understanding and analyzing improved sales for all development costs and for the abstraction of improvement costs for construction and development. Time and location modifiers are necessary to adjust cost data to reflect conditions in a specific market and changes in costs over a period of time. Because a national cost service is used as a basis for the cost models, location modifiers and estimates of soft cost factors are necessary to adjust these base costs specifically for various types of improvements located in Hood County. Thusly, local modifiers are additional cost factors applied to replacement cost estimated by the national cost service. Estimated replacement cost new will reflect all costs of construction and development for various improvements located in Hood 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 of 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 estimates based on observed market experience in operating various types of commercial property.

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

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

Return rates and income multipliers are used to convert operating income expectations into an estimate market value for the property under the income approach. These include income multipliers, overall capitalization rates, and discount rate. Each of these multipliers or return rates are considered and used in specific applications. Rates and multipliers may vary between property types, as well as by location, quality, condition, design, age, and other factors. Therefore, application of the various rates and multipliers must be based on a thorough analysis of the market for individual income property types and uses. These procedures are supported and documented based on analysis 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 rate of discounted cash flow analysis are derived from the market. Sales of improved properties from which actual income and expense data are obtained provide a very good indication of property return expectations a specific market participant is requiring from an investment at a specific point in time. In addition, overall capitalization rates can be derived and estimated from the built-up method (band-of-investment).

This method relates to satisfying estimated market return requirements of both the debt and equity positions in a real estate investment. This information is obtained from available sales of property, local lending sources, and from real estate financial publications.

Rent loss concessions are estimated for specific properties with vacancy problems. A rent loss concession accounts for the impact of lost rental income while the building is moving toward stabilized occupancy. The rent loss is calculated by multiplying the rental rate by the percent difference of the property's stabilized occupancy and its actual occupancy. Build out allowances (for first generation space or retrofit/second generation space as appropriate) and leasing expenses are added to the rent loss estimate. The total adjusted loss from these real property operations is discounted using an acceptable risk rate. The discounted value (inclusive of rent loss due to extraordinary vacancy, build out allowances and leasing commissions) becomes the rent loss concession and is deducted from the value indication of the property at stabilized occupancy. A variation of this technique allows a rent loss deduction to be estimated for every year that the property's actual occupancy is less than stabilized occupancy.

### ***Sales Comparison (Market) Approach***

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

### ***Final Valuation Schedules***

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

The final valuation of a property is estimated based on reconciling these indications of value considering the weight of the market information available for evaluation and analysis in these approaches to value.

### ***Statistical and Capitalization Analysis***

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

Appraisal statistics of central tendency and dispersion generated from sales ratios are calculated for each property type with available sales data. These summary statistics including, but not limited to, the weighted mean, provide the appraisers an analytical tool by which to determine both the level and uniformity of appraised value of a particular property type. The level of appraised values can be determined by the weighted mean for individual properties within a specific type, and a comparison of weighted means can reflect the general level of appraised value.

The appraisers review every commercial property type annually through the sale 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 statistic and designated parameters for valuation update, makes a preliminary decision as to

whether the value level of a particular property type needs to be updated in an upcoming reappraisal, or whether the level of market value is at an acceptable level.

Potential gross rent estimates, occupancy levels, secondary income, allowable expenses (inclusive of non-recoverable and replacement reserves), net operating income and capitalization rate and multipliers are continuously reviewed. Income model estimates and conclusions are compared to actual information obtained on individual commercial and industrial income properties during the protest hearing process, as well as with information from published sources and area property managers and owner.

## **INDIVIDUAL VALUE REVIEW PROCEDURES**

### ***Field Review***

The date of last inspection, extent of that inspection, and the Hood County 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 (known as cost modifiers), condition, and physical, functional and economic obsolescence factors contributing significantly to the market value of the property. In some cases field reviews are warranted when sharp changes in occupancy or rental rate levels occur between building classes or between economic areas. With preliminary estimates of values 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 valuations and reviews show proposed value changes, income model attributes or overrides, economic factor (cost overrides) and special factors affecting the property valuation such as new construction status, and a three years sales history (USPAP property history requirement for non-residential property).

The appraiser may review methodology for appropriateness to ascertain that it was completed in accordance with USPAP or more stringent statutory and district policies. This review is performed after preliminary ratio statistics have been applied. If the ratio statistics are generally acceptable overall the review process is focused primarily on locating skewed results on an individual basis. Previous values resulting from protest hearings are individually reviewed to determine if the value remains appropriate for the current year based on market conditions.

Each appraiser's review is limited to properties in their area of responsibility by property type (improved) or geographic area (commercial vacant land).

Once the appraiser is satisfied with the level and uniformity of value for each commercial property within their area of responsibility, the estimates of value go to noticing. Each parcel is subjected to the value parameters appropriate for its use type.

### ***Performance Tests***

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



Hood CAD has adopted the policies of the IAAO STANDARD ON RATIO STUDIES (circa July 1999) regarding its ratio study standards and practices. Ratio studies generally have six basic steps: (1) determination of the purpose and objectives, (2) data collection and preparation, (3) comparing appraisal and market data, (4) stratification, (5) statistical analysis, and (6) evaluation and application of the results.

### ***Sales Ratio Studies***

Sales ratio studies are an integral part of estimating equitable and accurate market values, and ultimately property assessments for these taxing jurisdictions. The primary uses of sale ratio studies include the determination of a need for general reappraisal prioritizing selected groups of property types for reappraisal, identification of potential problems with appraisal procedures, assist in market analyses, and, to calibrate models used to estimate appraised values during valuation or reappraisal cycles. However, these studies cannot be used to judge the accuracy of an individual property appraised value. The Hood County Appraisal Review Board may make individual value adjustments based on unequal appraisal (ratio) protest evidence submitted on a case-by-case basis during the hearing process.

Overall sales ratios are generated by uses type quarterly (or more often in specific areas) to allow appraisers to review general market trends in their area of responsibility and for the Property Study from the Property Tax Division of the type (such as apartment, office, retail and warehouse usage or special use). The objective to this evaluation is to determine appraisal performance of sold and unsold properties. Appraisers average unit prices of sales and average unit appraised values of the same parcels and the comparison of average value changes of sold and unsold properties. These studies are conducted on substrata such as building class and on properties located within various economic areas. In this way, overall appraisal performance is evaluated geographically, by specific property type to discern whether sold parcels have been selectively appraised. When sold parcels and unsold parcels are appraised equally, the average unit values are similar. These sales and equity studies are performed prior to final appraisal and to annual noticing.

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## **Business Personal Property Evaluation**

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### **INTRODUCTION**

## ***Appraisal Responsibility***

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

- **Personal** – The personal property staff consists of 1 appraiser and no support staff.
- **Data** – A common set of data characteristics for each personal property account in Hood CAD is collected in the field and data entered using a pen pad. The property characteristic data drive the computer-assisted personal property appraisal (CAPPA) system. The personal property appraiser collects the field data and maintains 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 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 Hood 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 code 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 highest present value as of the date of 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.

### ***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 an annual field inspection. This project results in the discovery of new businesses, changes in ownership, relocation of businesses, and closures of businesses not revealed through other sources. Tax assessors, city and local newspapers, and the public often provide the district information regarding new personal property and other useful facts related to property valuation.

### ***Vehicles***

An outside vendor provides Hood 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 by which to determine both the level and uniformity of appraised value by SIC code. Review of the standard deviation can discern appraisal uniformity within SIC codes.

### ***Depreciation Schedule and Trending Factors***

#### ***Business Personal Property***

Hood 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 Hood 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, as follows:

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

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

$$MARKET VALUE ESTIMATE = PVF \times HISTORICAL COST$$

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

#### ***Computer Assisted Personal Property Appraisal (CAPPA)***

The CAPPA valuation process has two main objectives: (1) Analyze and adjust estimated asset cost with existing SIC models. (2) Develop new models for business classifications

not previously integrated into CPPA. 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 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 (as applicable unit) is determined by a statistical analysis of the available data.

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

### ***Vehicles***

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

### ***Leased and Multi-Location Assets***

Leased and multi-location assets are valued using the PVF schedules mentioned above. If the asset to be valued in this category is a vehicle, then Policy Management Service 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 PVS is a ratio study using state cost and depreciation schedules to develop comparative personal property values. These values are then compared to Hood CAD's personal property values and ratios are indicated.

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## **Minerals (Oil and Gas Reserves) Valuation Process**

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## **INTRODUCTION**

## ***Appraisal Responsibility***

Minerals-in-place (oil and gas reserves) are real property. Appraisal of minerals, oil and gas reserves, is based on estimating 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 beings 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** – The mineral property appraisal is contracted with Pritchard & Abbott.
- **Data** – A common set of data characteristics for each mineral property account in Hood 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 Hood 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 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 the 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, 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 Hood 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 the property. These risks may vary considerably from one lease to another depending on several factors influencing the production from 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 Hood CAD.

### ***Value Review Procedures***

The method of value review for the 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 sale 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 sale, 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 a bi-annual ratio study of selected mineral properties to gauge the district's appraisal performance. The PTD utilized 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 Hood 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.

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## Utility Property Valuation Process

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### 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 Hood CAD.

#### *Appraisal Resources*

**Personnel** – The utility property appraisal is contracted with Pritchard & Abbott.

**Data** – A common set of data characteristics for each utility property account in Hood 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 gathered through industry specific governmental filings such as Federal Energy Regulatory Commission Reports, Securities and Exchange Commission 10-k filings, and Public Utility Commission publications. Other company information is gathered from annual reports, internal appraisals, and other in-house and industry publications. Property owner renditions are requested to document

and list property owned and located in our 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 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: 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. Hood 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 involves significant intangible property assets such as customer base, goodwill, favorable contracts, name recognition, etc. and the contributory value and allocation of these assets is subjective and unknown.

In Texas, intangible property assets are exempt from taxation and must not be included on the appraisal roll as taxable property. Therefore, because of the lack of specific market information on sales of utility properties, appraised value is regularly compared to the valuation of similar property within the same set of property characteristics, business type and size. More of 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 Hood CAD for these properties yield ratios. This ratio study of certain utility properties indicated the level and uniformity of appraisal for the category of property.

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**LIMITING CONDITIONS**

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The appraised value estimates to be conducted under this plan are subject to the following conditions:

1. The appraisal will be 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 will be performed as staff resources and time allow. Some interior inspections of property appraised will be 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 will be attempted through questionnaires to buyer and seller, telephone survey and field review. In the absence of such confirmation, residential sales data will be obtained from vendors considered reliable.
  
4. I have attached a list of staff that will be providing significant appraisal assistance to the person signing this certification

***Certification Statement:***

“I, Eddie Roe, Chief Appraiser for the Hood Central Appraisal District, solemnly swear that I will make a diligent inquiry to ascertain all property in the district subject to appraisal by me, and will be included in the records all property that I am aware of at an appraised value which, to the best of my knowledge and belief, will be determined as required by law.”

Eddie Roe  
 Chief Appraiser  
 TDLR #73118

**STAFF THAT WILL BE PROVIDING  
 SIGNIFICANT  
 APPRAISAL ASSISTANCE**

<u><b>NAME</b></u>	<u><b>TITLE</b></u>
Paula Clements	Appraisal Director
Kelley Montgomery	Commercial Appraiser
David Eatherly	Senior Appraiser
Steve McCoy	Senior Appraiser
Leighann Bererra	Appraiser
Julie Rhoden	Appraiser

Donna Wood	Appraiser
Christina Brawner	Appraiser
Stacy Blair	GIS/Mapping
Jodi Creager	Records/Data Processing
Pritchard & Abbott Inc.	Mineral, Industrial, Utility, Plan Documentation

## APPENDIX A

### **Geoquad Market Areas**

### **Neighborhood Codes**

1 2 3 4 5 6 7 8

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60 61 62 63 64 65 67 68

75 78 79

80 81 82 83 84 85 86 87 88 89

90 91 92 93 94 95 96 97

100 110 120 125 150 199

200 299

300

400-SF Hwy 377 Tolar

405-SF W Hwy 377 Granbury

410-SF E Hwy 377 Granbury

415-SF E Hwy 377 Cresson