

# Fort Bend Appraisal District

## 2021 Mass Appraisal Report

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### INTRODUCTION

#### *Scope of Responsibility*

The Fort Bend Central Appraisal District (FBCAD or the District) has prepared and published this report to provide our citizens and taxpayers with a better understanding of the District's responsibilities and activities. This report has several parts: a general introduction and then several sections describing the appraisal effort by the appraisal district.

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

FBCAD is responsible for local property tax appraisal and exemption administration for 220 jurisdictions or taxing units in the county. Each taxing unit, such as the county, city, school district, special district, etc., sets its own tax rate to generate revenue to pay for public services like police and fire protection, public schools, road and street maintenance, courts, water, and sewer systems. Appraisals established by FBCAD allocate the year's tax burden on the basis of each taxable property's January 1<sup>st</sup> market value. FBCAD also determines eligibility for various types of property tax exemptions such as those for homeowners, the elderly, disabled veterans, and charitable and religious organizations.

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 Property Tax Code defines special appraisal provisions for the valuation of residential homestead property (Sec. 23.23), productivity (Sec. 23.41), 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 allocation of interstate property (Sec. 23.03). The owner of personal property inventory may elect to have the inventory appraised at its market value as of September 1<sup>st</sup> of the year proceeding 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>.

The Texas Property Tax Code, under Sec. 25.18, requires each appraisal office to implement a plan to update appraised values for real property at least once every three years. FBCAD's current policy is to conduct a general reappraisal of real property at least every three years; however, appraised values are reviewed annually and are subject to change for purposes of equalization and to insure accurate market values. Business personal property is reappraised every year.

The appraised value of real estate is calculated using specific information about each property. Using computer-assisted appraisal programs and recognized appraisal methods and techniques, we compare that information with the data for similar properties and with recent market data. FBCAD 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. USPAP Standard Rules 5 and 6 applies to mass appraisal. In cases where an appraisal district contracts for professional valuation services, the contract that is entered into by each appraisal firm requires adherence to similar professional standards.

### ***Personnel Resources***

The Office of the Chief Appraiser is primarily responsible for the 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 land, commercial, residential, and business personal property.

The chief appraiser, who is the chief executive officer of the District, manages the District. All District employees report to the chief appraiser through their immediate supervisor. The District's appraisers are subject to the provisions of the Property Taxation Professional Certification Act and must be duly registered with The Texas Department of Licensing and Regulation.

The Appraisal District staff consists of the following employees:

*46–Employees with RPA*  
*34–Employees working towards RPA*  
*31–Residential Appraisers*  
*11–Commercial Appraisers*  
*9–Personal Property Appraisers*  
*7–Land Appraisers*  
*9–Customer Service*  
*6–GIS Staff*  
*6–IT/IS Staff*  
*51–Support Staff*  
*6–Admin*  
*1–Liaison Officer*

Hugh Landrum & Associates (Engineering Firm)

\*\*\*Temporary Part-Time help hired as needed for the Appraisal Review Board

### ***Licensing and Education***

FBCAD's appraisers are subject to the provisions of the Property Taxation Professional Certification Act and must be registered with Texas Department of Licensing and Regulation (TDLR). Education is achieved through courses approved by the State Comptroller Property Tax Assistance Division (PTAD). Most educational courses are sponsored by the International Association of Assessing Officers (IAAO), Texas Association of Assessing Officers (TAAO), and Texas Association of Appraisal Districts (TAAD). Appraisers must receive their Registered Professional Appraisal (RPA) designation within five years and are required to have 30 hours of continuing education hours over a 24-month period at the time of their license renewal.

### ***Data***

FBCAD is responsible for establishing and maintaining approximately 376,798 real and personal property accounts covering 873 square miles within the Fort Bend Central Appraisal District's territorial boundaries. This data includes property characteristic, 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 and office review.

Sales data is obtained from various sources including sales information obtained from sales letters mailed, property owners and property tax consultants during the annual Rendition and Appraisal Review Board processes as well as from third party sources. Sales are routinely validated during an office review and a separate field effort when applicable. Sales information received from reliable third-party sources are reviewed for reasonableness and are typically streamlined in the sales validation process. Sales are also validated as part of the building permit process and during the annual reappraisal effort.

FBCAD receives monthly building permits from all the cities within Fort Bend County. All significant building permits typically warrant an onsite property inspection. All building permit data received from the cities within Fort Bend County are updated to the applicable account.

Cost data as well as income and expense data is obtained from property owners and property tax consultants during the annual rendition and Appraisal Review Board processes as well as from third-party sources. Building class cost schedules are reviewed and developed annually for all real property. Income and expense data is also reviewed and developed annually for primarily income producing commercial property. The rendition process is the primary tool for gathering data for business personal property however third-party data is also utilized when applicable.

FBCAD has a geographic information system (GIS) that maintains maps and various layers of data, including aerial photography. FBCAD's website makes a broad range of information available for public access including detailed information on the appraisal process, property characteristics data, certified values, protests and appeal procedures, maps and aerial photography, frequently asked questions, Appraisal Review Board and FBCAD's online website processes as well as a tax calendar and links to other government agencies. Downloadable files of related tax information and district forms, including exemption applications and business personal property renditions, are also available. Taxpayer can also file protests online using FBCAD's online system. Business personal property renditions can also be filed online as well as general homestead exemptions.

### ***Information Systems***

Information Systems (IS) support is detailed with year specific functions identified and system upgrades scheduled. Computer generated forms are reviewed for revisions based on year and appraisal status. Legislative changes are scheduled for completion and testing. Refer to the incorporated budget for information systems upgrades. Reserve funds are also used when required due to rapid changes in available technology and unfunded state mandates.

## **INDEPENDENT PERFORMANCE TEST**

According to Chapter 5 of the TPTC and Section 403.302 of the Texas Government Code, the State Comptroller's Property Tax Assistance Division (PTAD) conducts a biennial property value study (PVS) of one-half of the appraisal districts and the affected school districts. The other half of the appraisal districts will have a biennial Methods and Assistance Program (MAP) review that will analyze each appraisal district's appraisal methods, standards, and procedures to determine whether the district used recognized standards and practices. The Code also requires the Comptroller to: use sales and recognized auditing and sampling techniques; test the validity of school district taxable values in each appraisal district and presume the appraisal roll values are correct when values are valid; and determine the level and uniformity of property tax appraisal in each appraisal district. The methodology used in the PVS includes stratified samples

to improve sample representativeness and techniques or procedures of measuring uniformity. This PVS utilizes statistical analysis of sold properties (sale ratio studies) and appraisals of unsold properties (appraisal ratio studies) as a basis for assessment ratio reporting. For appraisal districts, the reported measures include median level of appraisal, coefficient of dispersion (COD), the percentage of properties within 10% of the median, the percentage of properties within 25% of the median, and price-related differential (PRD) for properties overall and by State property category (i.e., categories A, B, C1, D and F1 are directly applicable to real property).

There are six independent school districts in Fort Bend CAD for which appraisal rolls are annually developed. The preliminary taxable values for school funding purposes are released in January in the year following the year of appraisal. The results are certified to the Education Commissioner of the Texas Education Agency (TEA) in the following August of each year for the year of appraisal.

Management and appraisal staff members are also responsible for conducting ratio studies and comparative analysis to insure accurate and equitable appraised values. The Quality Control Division also undertakes performance testing annually to ensure accuracy and uniformity.

#### Appraisal Activities

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## INTRODUCTION

### *Appraisal Responsibilities*

The field appraisal staff is responsible for collecting and maintaining property characteristic data for classification, valuation, and other purposes. Accurate valuation of real and business personal property by any method requires a physical description of business personal property, land, and building characteristics. This appraisal activity is responsible for administering, planning, and coordinating all activities involving data collection and maintenance of all commercial, residential, and business personal property types which are located within Fort Bend County. The data collection effort involves the field inspection and office review of real and business personal property accounts, as well as data entry of all data collected into the existing Orion CAMA system. The goal is to periodically field inspect residential, commercial and land properties in Fort Bend County at least every three years. In homogeneous areas and areas where there is high degree of confidence with our existing data, a three-year onsite inspection may not be warranted. The use of aerial photography and a periodic digital photography project may also be used in meeting these goals. Business personal property accounts are reviewed every year through the physical drive-out of the business personal property routes and the annual rendition process.

## **PRELIMINARY ANALYSIS**

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

Data collection of real property involves maintaining data characteristics of the property in the Orion CAMA system. The information contained in ORION includes site characteristics such as land size and improvement data, square foot of living area, year built, quality of construction, and condition for real property. Residential and commercial appraisers use divisional appraisal manuals that establish uniform procedures for the correct listing of real property data. All properties are classified according to these appraisal manuals, and the approaches to value are structured and calibrated based on these classification systems. Residential and commercial appraisers use their respective appraisal manuals during their initial training and as a guide in the field inspection and office review of properties.

Data collection for business personal property also involves maintaining information in ORION. The type of information contained in ORION includes business personal property such as business inventory, furniture and fixtures, machinery and equipment, cost, and location. The field appraisers conducting on-site inspections use a business personal property appraisal manual during their initial training and as a guide to correctly list all business personal property that is taxable.

The divisional appraisal manuals that are utilized by the field appraisers are available in the FBCAD offices. The divisional appraisal manuals are also located on our website for public inspection. If a property owner/agent wants a copy of the divisional manual, the open records department will handle this request. Management updates the divisional appraisal manuals as needed.

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

The sources of data collection are through the new construction field efforts, reappraisal, hearings, sales processing, newspapers, publications, property owner correspondence, and inquiries received via the Internet and third-party sources. A principal source of data comes from building permits received from taxing jurisdictions that require property owners to take out a building permit. Where available, permits are received electronically and loaded in ORION. Otherwise, paper permits are received and matched manually with the property's account number by the appraisal support staff and then scanned and updated into ORION.

Sales data provided by third-party sources that have historically provided extremely reliable and accurate sales information is considered verified and confirmed by FBCAD assuming deed transfer dates correlated with sale dates. If discrepancies arise then FBCAD will attempt to re-verify and confirm the sales data information from the appropriate parties. FBCAD typically

establishes a specific sales type for a given property at the time of reappraisal. The source of the sales information received by FBCAD is considered confidential.

Data review of entire residential neighborhoods, commercial market areas, and business personal property routes is generally a good source for discovery, data collection, and validation. Appraisers typically drive entire residential neighborhoods, commercial market areas, and business personal property routes to review the accuracy of the data and identify properties that need to be updated during the permit and reappraisal effort. During sales processing property characteristics are also verified. With residential and commercial properties, the sales validation effort involves office review and verification and when needed on-site inspection by field appraisers to verify the accuracy of the property characteristics. Sale surveys are also mailed out to the grantee and grantor on all undisclosed commercial sales and for certain targeted undisclosed land and residential sales.

Property owners are one of the best sources for identifying incorrect data that generates a field check. Frequently, the property owner provides sufficient 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 owner's requests to correct data inconsistencies has also increased. For the property owner without access to the Internet, letters are often submitted notifying the district of inaccurate data. Properties identified in this manner are added to a work file and inspected at the earliest opportunity.

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

Field data collection requires organization, planning and supervision of the field effort. Data collection procedures have been established for residential, commercial, and business personal property. The appraisers are assigned throughout Fort Bend County to conduct field inspections. Appraisers conduct field inspections and record information in ORION via their tablets.

The quality of the data used is extremely important in establishing accurate values of taxable property. While production 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 set forth in their divisional manual. Experienced appraisers are routinely re-trained in listing procedures prior to major field projects such as new construction and reappraisal. A quality control process exists through supervisory review of the work being performed by the field appraisers. Supervisors are charged with the responsibility of ensuring that appraisers follow listing procedures, identify training issues, and provide uniform training throughout the field appraisal staff. When applicable, senior appraisers will also assist with the quality control of the appraisal product,

### ***Data Maintenance***

The field appraiser is responsible for the data entry of his/her fieldwork directly into ORION via his/her tablet. This responsibility includes not only data entry but also quality assurance.

## **INDIVIDUAL VALUE REVIEW PROCEDURES**

### ***Field Review***

The date of last inspection, extent of that inspection, and the appraiser responsible are listed on the account record. If a property owner or taxing jurisdiction dispute the district's records concerning this data during a hearing, via a telephone call or correspondence received, the record may be altered based on the evidence provided. When needed, a field inspection is requested to verify this evidence for the current year's valuation or for the next year's valuation. Every year a field review of certain areas or neighborhoods in the jurisdiction is done during the annual reappraisal effort.

### ***Office Review***

Office reviews are completed on properties where information has been received from the owner of the property, taxing jurisdictions, or other sources. Aerial photographs and digital photographs are also used to verify property characteristics. When the property data is verified in this manner, field inspections are not required.

## **PERFORMANCE TEST**

Management and appraisal staff members are also responsible for conducting ratio studies and comparative analysis to insure accurate and equitable appraised values. The Quality Control Division also undertakes performance testing annually to ensure accuracy and uniformity.

## **GENERAL ASSUMPTIONS AND LIMITING CONDITIONS**

Properties are appraised at fair market value based on fee simple interest as of January 1 of every year.

Interior inspections of properties are not typically undertaken during reappraisal. Inspections are typically made from the exterior only. It is assumed that the condition of the interior of each property is similar to the exterior condition, unless FBCAD has received current information from qualified sources to indicate otherwise.

Property inspection dates will have ranged in time from both before and after the January 1 appraisal date. It is assumed that there has been no material change in condition from the latest property inspection unless otherwise noted on the account record.

Improvement sketch dimensions are calculated using exterior measurements and are rounded to the nearest foot.

FBCAD relies on deed instruments legally filed at the County and internal GIS maps to determine property boundaries and the associated land size for each property.

Properties are assumed to be free of any and all liens and encumbrances. Each property has also been appraised as though under responsible ownership and competent management.

It is assumed that the properties, the landowners, or both are in full compliance with all applicable, federal, state, and local environmental regulations and law.

It is assumed that there are no hidden or unapparent conditions associated with the properties, subsoil, or structures that would render the properties (land, improvements, or both) more or less valuable unless duly noted on the account record.

It is assumed that all applicable zoning and use regulations have been complied with.

Homesteaded residences on commercially zoned land are valued based on current use not highest and best use.

Information, estimates, and opinions furnished to the appraisers and incorporated into the analysis are assumed to be reliable.

The Texas Property Tax Code is the source document used in defining the laws and rules associated property tax valuation for the State of Texas.

Fort Bend Central Appraisal District appraisers appraise property per USPAP Standard Rules 5 and 6 and according to the laws and rules of the Texas Property Tax Code.

## **Residential Valuation Process**

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### **INTRODUCTION**

#### *Scope of Responsibility*

The Residential Valuation appraisers are responsible for developing equal uniform market values for residential improved and vacant property. There are approximately 241,045 residential improved parcels and 240,785 vacant residential properties within the Fort Bend CAD territorial boundaries.

#### *Appraisal Resources*

- **Personnel** - The Residential appraisal staff consists of 27 appraisers, and 2 analysts. There are also 2 Residential appraisal assistants who provide appraisal support.
- **Data** - A common set of data characteristics for each residential dwelling in Fort Bend County is collected in the field and data entered to the computer. The property characteristic data drives the computer-assisted mass appraisal (CAMA) approach to valuation. Property data attribute information is verified and corrected based on on-site inspections as well as office review using digital photographs and aerial photography. The following data attribute information is captured on each appraisal record: land value, zoning, PTAD code, building class, desirability and quality/design ratings, actual year built, effective year built, living area, additional improvements, total living area, foundation, heating, roof type, roofing, garage, frame, exterior walls, fireplace, bedrooms, wet bars, kitchens, full baths, half baths, remodel year, air conditioning, level of finish-out, deck, porch, spa, wooded lot, quiet street, special features, and percent complete.

### **MARKET AREA ANALYSIS**

#### *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 other internal and external sources of information

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

Neighborhood analysis involves the examination of how physical, economic, governmental, 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 each of the political entities known as Independent School Districts (ISD).

The first step in neighborhood analysis is the identification of a group of properties that share certain common traits. A market area commonly referred to as a "neighborhood" for analysis purposes is defined as the largest geographic grouping of properties where the property's physical, economic, governmental, and social forces are generally similar and uniform. Geographic stratification accommodates the local supply and demand factors that vary across a jurisdiction. Once a neighborhood 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, condition of dwellings, square footage of living area, and story height. Delineation involves the physical drawing of neighborhood boundary lines on a map. Part of neighborhood analysis is the consideration of discernible patterns of growth that influence a neighborhood's individual market. Few neighborhoods are fixed in character. Each neighborhood may be characterized as being in a stage of growth, stability, or decline. The growth period is a time of development and construction. As new neighborhoods in a community are developed, they compete with existing neighborhoods. An added supply of new homes tends to induce population shift from older homes to newer homes. In the period of stability, or equilibrium, the forces of supply and demand are about equal. Generally, in the stage of equilibrium, older neighborhoods can be more desirable due to their stability, character, and proximity to the workplace and other community facilities. The period of decline reflects diminishing demand or desirability. During decline, general property use may change from residential to a mix of residential and commercial uses. Declining neighborhoods may also experience renewal, reorganization, rebuilding, or restoration, which promotes increased demand and economic desirability.

Neighborhood identification and delineation is the cornerstone of the residential valuation system at the district. All the residential analysis work done in association with the residential valuation process is neighborhood specific. Neighborhoods are driven 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. For estate and unique properties, the neighborhood concept may not always be applicable if better comparables reside outside the subject's immediate neighborhood. For truly unique properties a larger sub-market (i.e. ISD) may be appropriate.

### ***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 potential. The highest and best use of residential property is normally its current use. This is due in part to the fact that residential development, in many areas, through use of deed restrictions and zoning, precludes other land uses. Residential valuation undertakes reassessment of highest and best use in transition areas and areas of mixed residential and commercial use. In transition areas with ongoing gentrification, the appraiser reviews the existing residential property use and makes a determination regarding highest and best use. Once the conclusion is made that the highest and best use remains residential, further highest and best use analysis is done to decide the type of residential use on a neighborhood basis. As an example, it may be determined in a transition area that older, non-remodeled homes are economic miss-improvements, and the highest and best use of such property is the construction of new dwellings. In areas of mixed residential and commercial use, the appraiser reviews properties in these areas on a periodic basis to determine if changes in the real estate market require reassessment of the highest and best use of a select population of properties. Effective January 1, 2010 per passage of House Bill 3613, the market value of a residential homestead is to be solely determined by its value as a residential homestead regardless of its highest and best use. FBCAD will value residential homestead properties based on its current use using residential comparables to support a total market value.

## **MODEL DEVELOPMENT AND VALUATION**

### ***Cost Schedules***

Residential parcels in the District are valued from building class cost schedules using a comparative unit method. The District's residential base building class cost schedules have been customized to fit Fort Bend County's local residential building and labor market. The District calibrates each building class cost table at the neighborhood level during the reappraisal effort to insure equitable and accurate appraised values. Cost schedules are updated annually, utilizing Marshall and Swift, a nationally recognized cost estimator. Mobile Homes cost schedules are derived annually from Marshall and Swift's Cost Handbook.

### ***Sales Information***

A sales file for sales data is maintained in ORION as well as in other data files such as Access and Excel. Residential improved and vacant sales are collected from a variety of sources, including surveys sent to buyer and seller, renditions, protest hearings, MLS, title companies, builders, fee appraisers, and realtors. Sale price, sale date, sale type, and source are recorded. Sales are used for ratio analysis, neighborhood building class model development and will be provided to taxpayers if the sale was used in the valuation of the taxpayer's property; however, the source of the sale remains confidential.

### ***Land Analysis***

Residential land analysis is conducted by the residential land analyst, and the land appraisers. They develop a base lot value and can price land on flat price, square foot, acreage, or front foot basis. Land market adjustments may be established for factors like view, shape, size, topography, utility easements, greenbelts, major thoroughfares, among others. In lieu of land sales information, appraisers may use abstraction and allocation methods to ensure that the land values created best reflect the contributory market value of the land to the overall property value.

### ***Statistical Analysis***

The residential analysts perform statistical analysis annually to evaluate whether values are equitable and consistent with the market. Ratio studies are conducted on each of the approximately 921 residential neighborhoods to the level of assessment and whether the neighborhood and associated building classes are in need of reappraisal. The level of appraised values is determined by the weighted mean for individual properties within a neighborhood and by building class within a neighborhood. Every neighborhood is reviewed annually by the analysts and appraisal supervisory staff through the sales ratio analysis process. The first phase involves neighborhood ratio studies that compare the recent sales prices of neighborhood properties to the appraised values of these sold properties. This set of ratio studies affords the analyst an excellent means of judging the present level of appraised value and uniformity of the sales.

### ***Uniform and Equal Analysis***

An equity analysis on an improved property can be conducted by the appraisal staff in the ORION Equity Module utilizing a subject and appraisal comparable grid and/or comparable sales analysis in the Orion Comparable Sales Module, an appraised to sale ratio indicator.

### ***Market Adjustment or Trending Factors***

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

comparison approach. This type of approach accounts for neighborhood market influences not specified in the base building class cost tables.

The following equation denotes the hybrid model used:

$$MV = LV + ((RCN \times BCLF) - D)$$

Whereas the market value (MV) equals land value (LV) plus the replacement cost new (RCN) times the neighborhood building class location factor (BCLF) less depreciation (D). As the cost approach separately estimates both land and building values and uses depreciated replacement costs, which reflect only the supply side of the market, it is expected that adjustments to the cost values are needed to bring the level of appraisal to an acceptable standard. Therefore, market, or building class location factors are applied uniformly by building class by neighborhood to insure equitable and accurate market values within these market areas. The ORION Neighborhood Analysis module is where the appraiser undertakes these calculations and documents the neighborhood trends and findings for the given reappraisal effort.

If a neighborhood is to be updated, the appraiser uses a sale ratio that compares recent sales prices of properties within a delineated neighborhood by building class with the properties actual cost value. The calculated ratio derived from the sum of the sold properties' cost value divided by the sum of the sales prices by building class indicates each neighborhood's building class level of value based on the unadjusted cost value for the sold properties within that building class range. A common building class location factor is then calculated to appraise the sold properties within that building class range at 100% of market value. The calculated building class location factor is then applied to both the sold and unsold properties within that neighborhood to insure equitable and accurate market values. This market adjustment factor or building class location factor is needed to trend the values obtained through the cost approach closer to the actual market evidenced by recent sales prices within a given neighborhood. The sales used to determine the building class location factor will reflect the market influences and conditions only for the specified building class within a neighborhood, thus producing more representative and supportable values. The building class location factor is applied uniformly to all similar class properties within the neighborhood. Once the building class factor(s) are applied for a given neighborhood, the appraiser reviews the final neighborhood's building class ratio and value reviews the neighborhood accounts proposed market values to insure accurate and equitable market values. This value review process may occur in the office or field if needed. GIS, aerial photography, digital photography, and other ORION functionality are used during the neighborhood value review process.

## **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 the new law, beginning in the second year a property receives a homestead exemption, increases in the value of that property are "capped." The value for tax purposes (appraised value) of a qualified residence homestead will be the lesser of:

- The market value; or
- The preceding year's appraised value;

Plus 10 percent;

Plus, the value of any improvements added since the last reappraisal.

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 following year. The ORION Capped Homestead module is where these calculations take place programmatically.

## **INDIVIDUAL VALUE REVIEW PROCEDURES**

### ***Field Review***

All significant building permits received from the cities within Fort Bend County are targeted for inspection annually including any partial complete properties in the preceding appraisal year. Inquiries from the public concerning incorrect data may also precipitate a field review for a given account. The appraiser during the field review will quality control and update the affected ORION fields for a given account insuring an accurate record.

The appraiser also identifies individual properties in critical need of field review through sales ratio analysis. Sold properties with a high variance in sales ratios are field reviewed to check for accuracy of data characteristics. Additionally, the appraiser frequently field reviews subjective data items such as architectural style, condition, desirability, 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 neighborhoods targeted for reappraisal, the appraiser value reviews the results. During this review, the appraiser is able to physically inspect both sold properties and unsold properties for data validation, comparability and consistency of values. GIS, aerial photography, digital photography, and other ORION functionality are also used during the value review process.

### ***Office Review***

Some building permits and inquiries from the public for any given account may not warrant a field review but rather an office review in which information can be updated from the office by an appraiser.

During the annual reappraisal effort, given the ample resources and time required to conduct a routine field review of all properties, homogeneous properties consisting of tract housing with a low variance in sales ratios and other properties having a recent field inspection date are value reviewed in the office. Valuation reports comparing previous values against proposed and final values are generated for all residential improved and vacant properties. GIS, aerial photography, digital photography, and other ORION functionality are also used during the value review process. The dollar amount and 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 values will be reviewed and approved by a supervisor for notification purposes.

The Residential Appraisal Manual outlines the various residential appraisal processes, ORION screens, and fields. This manual is maintained and updated frequently. The last update of the Residential Appraisal Manual was in 2018.

## **THREE APPROACHES TO VALUE**

The Mass Appraisal Records System (ORION) utilized by the Residential Division of the Fort Bend Central Appraisal District gives the ability to appraise property by all three approaches to value: cost approach, sales approach, and income approach.

### ***Cost Approach***

The cost approach is the first approach to value used by the Appraisal District. For residential properties there will always be a cost approach to value established on an account. The cost approach involves calculating the replacement cost new for each home and then deducting the appropriate amount for depreciation (effective age and condition, desirability, and utility). The result of this process is the sum of the depreciated value of the house and any other buildings or amenities on the property. The land value is then added back to the total depreciated value of all improvements established on account to arrive at the estimated market value of the account via

the cost approach. The cost approach is the primary valuation approach used when undertaking the reappraisal of a neighborhood. During the reappraisal effort, the cost approach is modified based on recent sales information by building class by neighborhood to arrive at estimated market value. Equity is achieved by applying the same location factor for all properties with the same building classification within a given neighborhood. The cost approach may be the preferred method used during the informal meetings with property owner or authorized agent and at the formal Appraisal Review Board hearing if the residential property is truly unique and doesn't have comparable sales information.

### ***Sales Approach***

The sales approach compares the property being appraised with similar properties that have recently sold. The characteristics of the sold properties are analyzed for their similarity to those of the subject property. Because no two properties are exactly alike, the prices of the sold properties must be adjusted to the subject property to account for any differences between the properties and the subject property. For instance, if the sold property had a pool and the subject property does not, an adjustment would be warranted. The newly adjusted sale prices give a direct reflection of the indicated market value of the unsold subject property. The sales approach can be used to value any property, whether improved or vacant. The sales approach is typically utilized during the informal meeting with property owners or authorized agent and at the formal Appraisal Review Board hearing when analyzing a residential property's estimated market value.

### ***Income Approach***

The income approach is used in very limited instances for residential properties. It is typically the preferred method for income producing commercial properties. Mobile home parks are typically valued on the income approach.

When reviewing a residential property's estimated market value during the informal and formal Appraisal Review Board process, the sales approach is typically the preferred method.

## **PERFORMANCE TESTS**

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

The primary analytical tool used by the analysts to measure and improve performance is the ratio study. FBCAD ensures that the appraised values that it produces meet the standards of accuracy in several ways. Overall sales ratios can be generated by building class, by neighborhood, by city, and by ISD to allow the appraiser to review general market trends within their area of responsibility and provide an indication of market appreciation over a specified period of time.

The Quality Control Division also undertakes performance testing annually to ensure accuracy and uniformity.

## Commercial Valuation Process

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### INTRODUCTION

#### **Scope of Responsibility**

This mass appraisal assignment includes all the commercially classed real property which falls within the responsibility of the commercial appraisers of the Fort Bend Central Appraisal District and located within the boundaries of this taxing jurisdiction. Commercial appraisers appraise the fee simple interest of properties according to statute. However, the effect of easements, restrictions, encumbrances, leases, contracts, or special assessments are considered on an individual basis. There are 75,944 commercial properties within the Fort Bend CAD territorial boundaries.

#### ***Appraisal Resources***

- **Personnel** – The commercial appraisal staff consists of 10 appraisers and 1 analyst. The appraisal responsibilities are categorized according to major property types of multi-family or apartment, office, retail, warehouse, industrial, and special use (i.e. hotels, hospitals and, nursing homes). There is also one commercial appraisal assistant who provides appraisal support.
- **Data** - The data used by the commercial appraiser includes verified sales of vacant land and improved properties and the pertinent data obtained from each (sales price levels, capitalization rates, income multipliers, equity dividend rates, marketing period, etc.). Other data used by the appraiser 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 and informational databases are also reviewed to provide additional support for market trends.

## **MARKET AREA ANALYSIS**

### ***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.

### ***Neighborhood Analysis***

The neighborhood (commonly referred to as Land Market Areas and Improved Market Areas) is comprised of the land area and commercially classed properties located within the CAD boundaries. These areas consist of a wide variety of property types including residential, commercial, multi-family and industrial. Neighborhood analysis involves the examination of how physical, economic, governmental, social forces, and other influences affect property values. 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.

Improved Market Areas (IMA) are defined by each of the improved property use types (apartment, office, retail, warehouse, industrial, 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. IMA 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 IMA specific. IMA's are periodically reviewed to determine if re-delineation is required. The geographic boundaries as well as income, occupancy, expense levels, and capitalization rates by age within each economic area for all commercial use types and its corresponding income model may be found in the commercial appraisal file.

### ***Highest and Best Use Analysis***

The highest and best use is the most reasonable and probable use that generates the highest 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 assists in determining if the existing improvements have a transitional use, interim use, nonconforming use, multiple uses, speculative use, excess land, or a different optimum use if the site were vacant. For vacant tracts of land within this jurisdiction, the highest and best use is considered speculative based on the surrounding land uses. Improved properties

reflect a wide variety of highest and best uses which include, but are not limited to office, retail, apartment, warehouse, light industrial, special purpose, or interim uses. In many instances, the property's current use is the same as its highest and best use. The highest and best use analysis ensures that an accurate estimate of market value is derived.

Effective January 1, 2010 per passage of House Bill 3613, the market value of a residential homestead is to be solely determined by its value as a residential homestead regardless of its highest and best use. FBCAD will value residential homestead properties based on its current use using residential comparables to support a total market value. Residential homestead properties may exist in the commercial file and if so then a current use valuation will occur.

### ***Market Analysis***

A market analysis relates directly to market forces affecting supply and demand. This study involves the relationships between social, economic, environmental, governmental, and site conditions. Current market activity including sales of commercial properties, new construction, new leases, lease rates, absorption rates, vacancies, allowable expenses (inclusive of replacement reserves), expense ratio trends and capitalization rate studies are analyzed at the Improved Market Area (IMA) level.

## **DATA**

### ***Appraisal Manuals***

The primary manual pertinent to data collection and documentation is the Commercial Appraisal Manual. This manual is continually updated, providing a uniform system of itemizing the multitude of components comprising improved properties. All properties located in Fort Bend CAD's inventory are coded according to this manual and the approaches to value are structured and calibrated based on this coding system.

The Commercial Appraisal Manual outlines the various Commercial appraisal processes. This manual is maintained and updated frequently. The last update of the Commercial Appraisal Manual was in 2019.

Annually, prior to the hearing season and after the sales have been researched, verified, keyed into the database, and quality control has been completed, the sales data are captured in FBCAD's sales file data base. The data base is used by the Fort Bend CAD appraisers during the reappraisal and hearing processes.

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

In terms of commercial sales data, Fort Bend CAD receives a copy of the deeds recorded in Fort Bend County that convey commercially classed properties. Other sources of sale data include the hearing process, local, regional, and national real estate and financial publications, and the CoStar Comps, Loop Net and Trepp sales data bases.

For those properties involved in a transfer of commercial ownership, a sale file is produced which begins the research and verification process. The initial step in sales verification involves a computer-generated questionnaire, which is mailed to both parties in the transaction (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 may be attempted via phone calls to both parties. If the sales information is still not obtained, other sources may be contacted such as 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. The sales source is always considered confidential.

## **MODEL DEVELOPMENT AND VALUATION**

### ***Cost Schedules***

The cost approach to value is applied to all improved real property utilizing the comparative unit method. This methodology involves the utilization of national cost data reporting services as well as actual cost information on comparable properties whenever possible. Cost models are typically developed based on the Marshall Swift Valuation Service and are reviewed annually. Cost models include the derivation of replacement cost new (RCN) of all improvements. These include comparative base rates, per unit adjustments, and lump sum adjustments. This approach also employs the sales comparison approach in the valuation of the underlying land value. Time and location modifiers are necessary to adjust cost data to reflect conditions in a specific market and changes in costs over time. Because a national cost service is used as a basis for the cost models, location modifiers are necessary to adjust these base costs specifically for Fort Bend County. These modifiers are provided by the national cost services.

Depreciation schedules are developed based on what is typical for each property type at that specific age. Depreciation schedules have been implemented for what is typical of each major class of commercial property by economic life categories. These schedules are then tested to ensure they are reflective of current market conditions. The actual and effective ages of improvements are noted in ORION. 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.

Market adjustment factors such as external and/or functional obsolescence can be applied if warranted. 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 property type or location and can be developed via ratio studies or other market analyses. Accuracy in the development of the cost schedules, condition ratings and depreciation schedules will usually minimize the necessity of this type of an adjustment factor.

### ***Land Analysis***

Commercial land analysis is conducted by each of the land appraisers. The appraisers develop a base lot value and can price land on flat price, square foot, acreage, or front foot basis. Land market adjustments may be established for factors like view, shape, size, topography, utility easements, greenbelts, and major thoroughfares, among others. In lieu of land sales information appraisers may use abstraction and allocation methods to ensure that the land values created best reflect the contributory market value of the land to the overall property value. Furthermore, equity considerations ensure that land affected by similar market influences is valued uniformly.

### ***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 square foot basis. This is derived primarily from actual rent data furnished by property owners and from local market study publications. This per square foot rental rate multiplied by the number of square feet results in the estimate of potential gross rent.

Next, a “plus electric” is calculated as a lump sum or as a per square foot estimate. The lease type component applies to commercial properties to reflect a tenant’s pro rata share of property insurance, utilities, maintenance, repairs, and property tax costs. This is derived from actual rent data furnished by property owners and market study publications. There are three typical lease types: Triple Net Lease, Full Service Lease, and Modified Gross Lease.

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 on local market publications. This allowance accounts for periodic fluctuations in occupancy, both above and below an estimated stabilized level. The market derived stabilized vacancy and collection loss allowance is subtracted from the potential gross rent estimate to yield an effective gross rent.

Next, secondary income is calculated on a lump sum, per square foot or per unit basis. 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.

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 are not included in the expenses. A non-recoverable expense represents costs that the owner pays to lease rental space. Different expense ratios are developed for different types of commercial property based on use. For instance, retail properties are most frequently leased on a triple-net basis, whereby the tenant is responsible for his pro-rata share of taxes, insurance, and common area 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. However, any amount in excess of the total per unit expenditure in the first year is the responsibility of the tenant. Under this scenario, if the total operating expense in year one (1) equates to \$8.00 per square foot, any increase in expense over \$8.00 per square foot throughout the remainder of the lease term would be the responsibility of the tenant. As a result, expense ratios are implemented based on the type 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 large lump sums. 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.

Subtracting the allowable expenses (inclusive of replacement reserves) from the effective gross income yields an estimate of net operating income.

Rates and multipliers are used to convert income into an estimate of market value. These include income multipliers, overall capitalization rates, and discount rates. Each of these is used in specific applications. Rates and multipliers also 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.

Capitalization analysis is used in the income approach models. This methodology involves the capitalization of net operating income as an indication of market value for a specific property. Capitalization rates, both overall (going-in) cap rates for the direct capitalization method and terminal cap rates for discounted cash flow analyses, can be derived from the market. Sales of improved properties from which actual income and expense data are obtained provide a very

good indication of what a specific market participant is requiring from an investment at a specific point in time. In addition, overall capitalization rates can be derived from the built-up method (band-of-investment). This method relates to satisfying the market return requirements of both the debt and equity positions of a real estate investment. This information is obtained from real estate and financial publications.

Rent loss concessions are made on 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 that for every year that the property's actual occupancy is less than stabilized occupancy a rent loss deduction may be estimated. (Lost NOI)

Finally, a deferred maintenance estimate may be deducted from the overall stabilized value. This estimate is for curable physical deterioration of items in need of immediate repair on the assessment date. Deferred maintenance does not include capital improvement items to be phased in over time.

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

The sales comparison approach, sometimes referred to as the market approach, is used in a limited capacity when arriving at a market value for commercial property due to limited commercial sales data, lack of homogeneity between commercial property, and complexities of appraising property in a fee simple environment. However, the approach is utilized not only for estimating land value but also in comparing sales of similarly improved properties to each parcel 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 establishing the depreciation percentages in the cost approach and the capitalization rates and multipliers used in the income approach as well as a direct comparison in the sales comparison approach.

Sales information is also used in ratio studies, which afford the appraiser an excellent means of judging the level of assessment for a given property and/or class of properties which in turn assists in the calibration of income models.

### ***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.

The appraisers review every commercial property type annually through the sales ratio analysis process. The first phase involves ratio studies that compare the recent sales prices of properties to the appraised values of the sold properties. This set of ratio studies affords the appraiser an excellent means of judging the present level of appraised value and uniformity of the appraised values. The appraiser, based on the sales ratio statistics and designated parameters for valuation update, makes a preliminary decision as to whether the value level of a particular property type needs to be updated in an upcoming reappraisal, or whether the level of market value is at an acceptable level.

Potential gross rent estimates, occupancy levels, secondary income, allowable expenses (inclusive of replacement reserves), net operating income, capitalization rates, and multipliers are continuously reviewed utilizing statistical procedures or measures. Income model conclusions are compared to actual information obtained on individual commercial properties during the hearings process as well as information from published sources and area vendors such as CoStar Properties, ApartmentData.com (ADS), and TREPP.

### ***Mineral Valuations***

Mineral valuations within Fort Bend County are conducted annually by the firm of Hugh L. Landrum Associates, Inc.

### ***Agricultural Valuations***

The land appraisal staff appraise all qualified agricultural properties based on agricultural use. For any given account that qualifies for agricultural valuation, both an agricultural valuation and fair market value will be established for the property. The agricultural valuation and affected methodology are outlined in the Ag appraisal manual.

## **INDIVIDUAL VALUE REVIEW PROCEDURES**

### ***Field Review***

All significant building permits received from the cities within Fort Bend County are targeted for inspection annually including any partial complete properties in the preceding appraisal year. Inquiries from the public concerning incorrect data may also precipitate a field review for a given account. The appraiser during the field review will quality control and update the affected ORION fields for a given account insuring an accurate record.

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. Additionally, the appraisers frequently field review subjective data items such as building class, quality of construction (known as cost modifiers), condition, and physical, functional, and economic obsolescence factors contributing significantly to the market value of the property. In some cases, field reviews are warranted when sharp changes in occupancy or rental rate levels occur between building classes or between economic areas. With preliminary estimates of value in these targeted areas, the appraisers test computer assisted values against their own appraisal judgment. While in the field, the appraisers physically inspect sold and unsold properties for comparability and consistency of values.

### ***Office Review***

Office reviews are typically limited by the data presented in final value reports. These reports summarize the pertinent data of each property as well as comparing the previous values to the proposed value conclusions of the various approaches to value. These reports show proposed percentage value changes, income model attributes or overrides, economic factor (cost overrides), and special factors affecting the property valuation such as new construction status, prior year litigation, and a sales history. 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. Therefore, although the value estimates are determined in a computerized mass appraisal environment, value edits enable an individual parcel review of value anomalies before the estimate of value is released for noticing.

## **THREE APPROACHES TO VALUE**

The Mass Appraisal Records System (ORION) utilized by the Commercial Division of the Fort Bend Central Appraisal District gives the ability to appraise property by all three approaches to value: cost approach, sales approach, and income approach.

### ***Cost Approach***

The cost approach involves calculating the replacement cost new for each improvement and then deducting the appropriate amount of depreciation using age/life tables. The cost tables utilized by FBCAD are initially derived from a recognized national cost publication service that develops its data from actual case studies of sales and market value appraisals. FBCAD further augments this data with its own cost information received during the appeals process through property cost of construction documentation and other cost sources. Based on the physical characteristics of a subject property, the FBCAD cost tables generate a price per square foot that is applied to the subject improvement. The land value is then added to the depreciated value of the improvements to establish the estimated market value of the property via the cost approach. The FBCAD building class cost tables are updated on an annual basis. The cost approach may be the preferred method used during the informal meetings with property owner or authorized agent and at the formal Appraisal Review Board hearing if the commercial property is a special use property, a new property recently constructed, lacks comparable sale information, and/or the sale doesn't lend itself to the income approach to value.

### ***Sales Approach***

The sales approach involves determining market value of a subject property by analyzing sales of comparable properties. FBCAD collects sales from several sources including sales surveys, market research companies, third-party appraisals, and local media. The bulk of sales information is received through the Appraisal Review Board (ARB) process in the form of closing statements. The sales are processed and entered into the commercial sales database. The sale prices can further be adjusted based on sale conditions, land size, improvement size, age, condition, and location. Finally, the appraiser may weight the sales to arrive at an overall adjusted value per square foot or unit via the sales approach.

### ***Income Approach***

The income approach involves the capitalization of income into an estimation of market value. FBCAD emphasizes the direct capitalization approach where a single year's net operating income is capitalized. Capitalization is the process of dividing the subject property's estimated net operating income by a market capitalization rate to arrive at an indicated estimate of market value via the income approach. Market income data is compared to the subject's property income

data to ensure subject's income data is reflective of market standards. If not, then market standards will be used for income calculations. FBCAD collects income/expense statements and rent rolls from property owners throughout the year, but primarily during the appeals process. Rents, occupancies, expenses, secondary income, and net operating income for these properties are entered in to the commercial income database. Capitalization rates are then estimated based on sale prices of properties and their respective net operating incomes. Outside sources such as market research companies and real estate publications are also referenced for data pertaining to income, expense, occupancy, and capitalization rates. FBCAD analyzes this data to determine market income models for properties based on their physical characteristics and improved market areas. Actual income components for a property are then compared to market indicators and an estimated market value is established via the income approach. The income approach is typically the preferred method when analyzing typical income producing commercial properties (Retail, Office, Apartments, Industrial) not only during the reappraisal effort but during the informal meetings with property owners and/or authorized agents and at the formal Appraisal Review Board hearings.

## **PERFORMANCE TESTS**

The primary tool used to measure mass appraisal performance is the ratio study. A ratio study compares appraised values to market values. In a ratio study, market values (value in exchange) are typically represented by sales prices (i.e. a sales ratio study). Independent, expert appraisals may also be used to represent market values in a ratio study (i.e. an appraisal ratio study). If there are not enough sales to provide necessary representativeness, independent appraisals can be used as indicators for market value. This can be particularly useful for commercial, warehouse 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.

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

Sales ratio studies are an integral part of establishing equitable and accurate market value estimates, and ultimately assessments for this taxing jurisdiction. 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 derive appraised values during valuation or reappraisal cycles. However, these studies cannot be used to judge the accuracy of an individual property's appraised value. The Appraisal Review Board of Fort Bend County 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 use type annually (or more often in specific areas) to allow appraisers to review general market trends in their area of responsibility. The appraisers utilize many ORION applications to evaluate subsets of data by economic area or a specific and unique data item. In ORION, this may be customized and performed by building class and age basis. In many cases, field checks may be conducted to ensure the ratios produced are accurate and the appraised values utilized are based on accurate property data characteristics. These ratio studies aid the appraisers by providing an indication of market activity by economic area or changing market conditions (appreciation or depreciation).

### ***Comparative Appraisal Analysis***

The commercial appraiser performs an average unit value comparison in addition to a traditional ratio study. These studies are performed on commercially classed properties by property use type (such as apartment, office, retail, and warehouse usage or special use). The objective to this evaluation is to determine appraisal performance of sold and unsold properties. 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.

### **Business Personal Property Valuation Process**

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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 (BPP) accounts, leased assets, vehicles, and multi-location assets. There are approximately 23,452 business personal property accounts within FBCAD's jurisdiction.

### **Appraisal Resources**

- **Personnel** - The BPP staff consists of 8 appraisers. Of the 8 appraisers 1 appraiser is assigned to aircraft and special inventory and all other BPP appraisal functions. The remaining appraisal staff assist in BPP related appraisal functions such as field inspections, ARB hearings, and renditions.
- **Data** - A common set of data characteristics for each personal property account in Fort Bend County is collected and updated in Orion by support service assistants.
- **ANALYSIS**

### *Business Type Code Analysis*

FBCAD uses six-digit numeric codes, based on the North American Industrial Classification System. The derivative of the NAICS classification codes are called business type codes that are used by the FBCAD as a way to classify similar types of personal property.

Business type code identification and delineation is the cornerstone of the personal property valuation system at FBCAD. All personal property analysis work done in association with the personal property valuation process is business type code specific. There are 400 FBCAD personal property business type codes. Business type codes are delineated based on observable aspects of homogeneity. Business type code delineation is periodically reviewed to determine if further delineation is warranted.

### *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 personal property is normally its current use.

## **DATA**

### ***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. The most recent revision of the personal property data collection procedures was in 2021.

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

#### **Business Personal Property**

FBCAD's property characteristic data was originally received from Fort Bend County and various school district records in 1980, and where absent, collected through a massive field data collection effort coordinated by the district over a period of time. Since the initial data collection, the District appraisers have maintained the appraisal roll through annual field drive-outs. This project results in the discovery of new businesses not revealed through other sources. Various published sources, such as trade journals, business publications, and internet research are also used to assist in discovering business personal property. 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 FBCAD with a listing of vehicles within the FBCAD's jurisdiction. The vendor develops this listing from the Texas Department of Transportation (TXDOT) Title and Registration Division records. Other sources of data include property owner renditions and field inspections.

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

The primary sources of leased and multi-location asset discovery are property owner renditions of property. Other sources of data include field inspections, trade journals, and internet research.

## MODEL DEVELOPMENT AND VALUATION

### *Cost Schedules*

Cost schedules are developed by business type code 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 business type codes are in an alternate price per unit format.

### *Statistical Analysis*

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

### *Depreciation Schedule and Trending Factors:*

#### Business Personal Property

FBCAD'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 the FBCAD developed valuation models. The trending factors used by the FBCAD to develop RCN are based on published valuation guides. The percent good depreciation factors used by FBCAD 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:

$$\text{PVF} = \text{INDEX FACTOR} \times \text{PERCENT GOOD FACTOR}$$

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

$$\text{MARKET VALUE ESTIMATE} = \text{PVF} \times \text{HISTORICAL COST}$$

This mass appraisal PVF schedule is used to ensure that estimated values are uniform and consistent within the market.

### *Mass Appraisal Records System (ORION)*

The ORION program includes a CAPP module that has two main objectives: 1) Analyze and adjust existing business type code models. 2) Develop new models for business classifications

not previously integrated into ORION. The delineated sample is reviewed for accuracy of business type 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 business type codes for model analysis. 2) Compiling the data and developing the reports. The models are built and adjusted using internally developed software. The models are then tested against the previous year's data. The typical RCN per square foot (or applicable unit) is determined by a statistical analysis of the available data.

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 year's value is compared to the indicated model value by the valuation program. If the value being tested is within an established acceptable percentage tolerance range of the model value, the account passes that range check and moves to the next valuation step. If the account fails the tolerance range check, it is flagged for individual review. Allowable tolerance ranges may be adjusted from year to year depending on the analysis of the results of the prior year.

### Vehicles

Value estimates for vehicles are provided by an outside vendor and are based on published values. 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 or published value guides.

## **INDIVIDUAL VALUE REVIEW PROCEDURES**

### *Office Review*

#### Business Personal Property

A district valuation computer program (ORION) exists in a client-server 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 ORION and pass or fail preset tolerance parameters by comparing appraised values to prior year and model values. Accounts that fail the tolerance parameters are reviewed by the appraisers.

#### Vehicles

A vehicle master file is received electronically from an outside vendor. These vehicles are then matched to existing accounts and new accounts are created as needed. Vehicles that are not valued by the vendor are valued by an appraiser using PVF schedules or published guides.

#### Leased and Multi-Location Assets

Leasing and multi-location accounts that have a high volume of vehicles or other assets are loaded programmatically into ORION if reported by the property owner electronically. Electronic renditions, usually on CD, often require reformatting before they can be loaded to the account. Accounts that render in a hard copy format are scanned and processed using OCR software or manually entered into ORION by FBCAD.

After matching and data entry, reports are generated and reviewed by an appraiser. Corrections are made and notices are generated after supervisor approval.

The Business Personal Property Appraisal Manual outlines the BPP appraisal processes. This manual is rigorously maintained and updated frequently. The last update of the Business Personal Property Appraisal Manual was in 2018.

## **THREE APPROACHES TO VALUE**

The mass appraisal records system (ORION) utilized by the Business Personal Property Division of the Fort Bend Central Appraisal District gives the ability to appraise property by all three approaches to value: cost approach, sales approach, and income approach.

### ***Cost Approach***

The cost approach is typically the approach used to value business personal property, although all approaches (income, cost, and sales) are considered, the cost approach offers the most equitable and consistent method for mass appraisal of business personal property. The BPP appraiser will estimate the market value by comparing the subject business being appraised against similar types of businesses. The appraiser considers the size of the business, the quality and condition of the assets, and estimates the overall age of the assets. In addition to the business assets, the appraiser will also estimate the market value of the inventory based on the quantity and make any known condition adjustments.

### ***Sales Approach***

The sales approach may be used for certain types of business personal property that have substantial secondary markets such as cars and trucks. However, the sales approach is often less useful with many types of business assets that do not have an active used market.

### ***Income Approach***

The income approach is rarely used since it is often impossible to differentiate the income from the business personal property being valued and the income associated with the components of a business.

## **RENDITION PROCESS**

The most important step in completing a business personal property appraisal is based on reviewing the business personal property rendition from.

BPP renditions contain information provided by the property owner and are legally required to be filed annually by the property owner per the Texas Property Tax Code no later than April 15, and upon written request by the property owner, the chief appraiser shall extend a deadline for filing a rendition statement to May 15. Not filing a business personal property rendition by the annual April 1<sup>st</sup> deadline date will result in a 10% penalty being applied to the business personal property tax bill. FBCAD encourages all business owners to file an online business personal property rendition.

The BPP rendition requests basic information about a business including cost, year assets were acquired, inventory values, consigned goods, leased equipment, and the property owner's opinion of value.

The FBCAD mails BPP renditions forms to all existing BPP accounts in Fort Bend County in January of every year. FBCAD also provides on its website ([www.FBCAD.org](http://www.FBCAD.org)) an online BPP rendition filing system that is simple and easy to use. The online BPP rendition filing system can be accessed by using a PIN number located at top of the BPP rendition that is mailed each January. FBCAD encourages all business owners to use the online BPP rendition filing system as opposed to filing the rendition using the paper form. Utilizing the online BPP filing system is beneficial for both FBCAD and the property owner.

A properly filed BPP rendition form allows the BPP appraiser to:

- Verify the legal owner, DBA, and physical location of the property January 1 of the appraisal year.
- Use contact information on the rendition form if the appraiser has questions about the business being appraised.
- Compare cost or opinion of value information against the estimate of value made by the appraiser in the field.

With the appraiser's information gathered in the field and a properly filed BPP rendition form from the property owner or authorized agent, the BPP appraiser has enough information to make an accurate and equitable business personal property market value estimate used to determine the business' property taxes.

## **PERFORMANCE TESTS**

### ***Ratio Studies***

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

### ***Internal Testing***

The FBCAD can test new or revised cost and depreciation schedules by running the valuation program in a test mode prior to the valuation cycle. This can give appraisers a chance to make additional refinements to the schedules if necessary.

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***LIMITING CONDITIONS***

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

1. The appraisals were prepared exclusively for ad valorem tax purposes. The assessment date is as of January 1, 2021.
2. The property characteristic data upon which the appraisals are based is assumed to be correct. Exterior inspections of the property appraised were performed as staff resources and time allowed.
3. Sales data received from reliable third-party sources is considered verified and confirmed when deed transfer dates and sales dates correlate with each other.
4. I have attached a list of staff providing significant mass appraisal assistance to the person signing this certification.

***Certification Statement:***

"I, Jordan T. Wise, Chief Appraiser/Executive Director for the Fort Bend Central Appraisal District, solemnly swear that I have made or caused to be made a diligent inquiry to ascertain all property in the district subject to appraisal by me, and that I have included in the records all property that I am aware of at an appraised value which, to the best of my knowledge and belief, was determined as required by law."

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Jordan T. Wise  
Chief Appraiser/Executive Director  
Fort Bend Central Appraisal District

## MASS APPRAISAL ASSISTANCE

<b>Last Name</b>	<b>First Name</b>	<b>TDLR #</b>	<b>Division</b>	<b>Position</b>
Adidi	Latisha	72230	Commercial	Appraiser
Alvarado	Taylor	75946	Residential	Appraiser
Applegate	Michael	74674	Residential	Appraiser
Bartlett	Gary	76582	Residential	Appraiser
Bejarano	Jocelyne	76581	Residential	Appraiser
Benjebbour	Tiffany	73999	ARB/Arbitration	Director
Boettcher	Jerrica	74980	Residential	Appraiser
Cage	Desmond	76627	Residential	Appraiser
Brown	Henry	72179	Commercial	Appraiser
Bustos	Janie	76493	Residential	Support Associate
Cariaga	Anna	75117	Land	Appraiser
Castillo	Joe	75238	Residential	Appraiser
Clark	Karen	75577	Personal Property	Appraiser
Coba	Indra	76330	Personal Property	Appraiser
Cole	Christi	69343	Information & Assistance	Support Associate
Damani	Naila	76256	Residential	Support Associate
DeLeon	Karen	74257	Personal Property	Appraiser
Duran	Yvonne	74128	Personal Property	Director
Edwards-Lott	Joscelyne	75239	Residential	Appraiser
Ellis	Michael	75903	Residential	Appraiser
Estrada	Maria	72181	Residential	Appraiser
Flores	Daniel	74596	Commercial	Appraiser
Fredrickson	Bo	69005	Land	Appraiser
Fuentes	Francisco	75706	Residential	Appraiser
Garcia	Amanda	74942	Residential	Appraiser
Garcia	Jasmine	76493	Personal Property	Appraiser
Garza	Christene	72362	Commercial	Analyst
Guevara	Maggie	75861	Property Records & Administration	Support Associate
Hall	Matthew	71999	Information & Assistance	Director
Heitman	Katie	74574	Residential	Appraiser
Herrera	Jeanine	75588	Personal Property	Appraiser
Herrera	Natasha	74255	Residential	Analyst
Herrera	Raymond	74444	Commercial	Appraiser
Hester	Ashley	75637	Residential	Appraiser
Jackson	Lori	74000	Personal Property	Director
Jamail	Helen	72753	Personal Property	Appraiser
Jeronimo	Bianca	75193	Geographic Information Systems	GIS Specialist
Ji	Vivian	75589	Personal Property	Appraiser
Johnson	Tracey	72418	Commercial	Director
Klein	Irene	66460	Administration	Deputy Chief Appraiser
Kruse	Ben	71231	Land	Director
Llanes	Isabel	72419	Residential	Appraiser

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Luna	Cesar	75738	Residential	Appraiser
Manak	Kris	75192	Land	Analyst
Martinez	Melissa	76276	Residential	Appraiser
Masculine	Tiffany	75779	Residential	Appraiser
Moreno	Gilbert	73902	Residential	Appraiser
O'Dwyer	Barry	73398	Litigation	Appraiser
Paule	Zurelle	75945	Residential	Appraiser
Phillips	Wayne	70270	Residential	Appraiser
Rangel	Cynthia	75240	Personal Property	Appraiser
Reyes	Jacob	75586	Residential	Appraiser
Robles	Kelvin	76584	Residential	Appraiser
Rodriguez	Kimberly	75585	ARB/Arbitration	Coordinator
Rubalcaba	Mandi	75444	Property Records & Administration	Director
Schlepphorst	Gerhard	74037	Commercial	Appraiser
Schweinler	Brandon	74938	Commercial	Appraiser
Smith	Mark	73192	Commercial	Appraiser
Soliz	Crystal	75453	Land	Appraiser
Stavely	Taffanie	75587	Residential	Appraiser
Steffey	Whitney	76513	Land	Appraisal Associate
Strine	Tara	73203	Administration	Deputy Chief Appraiser
Sury	Rodney	68539	Residential	Appraiser
Tejeda	Sara	75584	Property Records & Administration	Sr Research Associate
Templet	Marissa	75967	Residential	Appraiser
Thompson	Brandon	74256	Residential	Director
Torres	Paul	68815	Commercial	Appraiser
Vasquez	Carlos	72674	Commercial	Appraiser
Washington	LaTonja	71961	Litigation	Appraiser
Wharton	Charles	74663	Residential	Appraiser
Williams	Kaitlin	76623	Residential	Appraiser
Wise	Jordan	73354	Administration	Chief Appraiser
Wogan	Rex	73425	Communications & Outreach	Director
Wooten	Cliff	75012	Residential	Appraiser