Brazoria County Appraisal District

2022 Mass Appraisal Report

Effective Date of Appraisal: January 1, 2022
Effective Date of Report: May 2022

Members of the Brazoria County Appraisal Review Board

In accordance with the laws of the State of Texas and Uniform Standards of Professional Appraisal Practices (USPAP), the Brazoria County Appraisal District has performed a diligent appraisal process to list and assign appropriate values for each of the parcels within the boundaries of Brazoria County. Those properties appraised and listed on the appraisal rolls for each of the taxing jurisdictions are subject to appeal and approval prior to certification in July 2022.

For your inspection, this report summarizes the appraisal considerations and opinions of the registered appraisal staff. The market and taxable values presented in this report are representative of the values included on the Notices of Appraised Values delivered to property owners in April 2022.

Marcel Pierel
Chief Appraiser

INTRODUCTION

Scope of Responsibility

The Brazoria County Appraisal District has prepared and published this report for availability to the appraisal review board. It can also provide our citizens, taxpayers, and taxing jurisdictions a better understanding of the district's annual responsibilities and activities. This report has several parts: a general introduction and then several sections describing the annual appraisal effort by the appraisal district.

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

The appraisal district is responsible for local property tax appraisal and exemption administration for 85 jurisdictions or taxing units in the county. Each taxing unit, such as the county, a city, school district, municipal utility districts, etc., sets its own tax rate to generate revenue to pay for such things as police and fire protection, public schools, road and street maintenance, courts, water and sewer systems, and other public services. Appraisals established by the appraisal district allocate the year's tax burden on the basis of each taxable property's January 1st market value. The appraisal district 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 1st. 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 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 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. The district's current policy is to conduct a general reappraisal of real property every three (3) years. However, the district administers an adopted annual reappraisal plan and appraised values are reviewed annually and are subject to change for purposes of equalization and market value. To view the district's current plan, visit www.brazoriacad.org For additional information or to view the entire tax code, visit https://comptroller.texas.gov/taxes/property-tax/.

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, the appraisal staff compares that information with the data for similar properties, and with recent market data. The district follows the standards of the International Association of Assessing Officers (IAAO) regarding its appraisal practices and procedures and subscribes to the standards promulgated by the Appraisal Foundation known as the Uniform Standards of Professional Appraisal Practice (USPAP). The appraisal staffs named in this report are licensed with the Texas Department of Licensing and work under the oversite of the Property Tax Assistance Division of the Texas State Comptroller's office (PTAD). In cases where the appraisal district contracts for professional valuation services, the contract that is entered into by each appraisal firm requires adherence to similar professional standards.

Personnel Resources

The Office of the Chief Appraiser is primarily responsible for overall planning, organizing, staffing, coordinating, and controlling of district operations. The Administration Department's function is to plan, organize, direct and control the business support functions related to human resources, budget, finance, records management, purchasing, fixed assets, facilities and postal services. The Appraisal Department is responsible for the valuation of all real and personal property accounts. The appraisal divisions include commercial, residential, business personal, land/agriculture and industrial. The district's appraisers are subject to provisions of the Property Taxation Professional Certification Act and must be duly registered with The Texas Board of Tax Professional Examiners. The appraisal district staff consists of 60 employees with the following classifications:

- 4 – Official/Administrator (Executive level administration)
- 12 – Professional (Senior level)

- 17 – Technicians (Appraisers, program appraisers and network specialists)
- 4 – Registered In-House Appraisers
- 19 – Administrative Support (professional, customer service, clerical and other)

Data

As of 2022, the district was responsible for establishing and maintaining approximately 224,000 total accounts. This count includes about 178,000 real properties covering 1,447 square miles within Brazoria County. This data includes property characteristic and ownership and exemption information. Property characteristic data on new construction is updated through an annual field effort; existing property data is maintained through a field review that is prioritized by last field inspection dates. Sales are routinely validated during a separate field effort; however, numerous sales are validated as part of the new construction and data review field activities. General trends in employment, interest rates, new construction trends, and cost and market data are acquired through various sources, including internally generated questionnaires to buyer and seller, university research centers, and market data centers and vendors.

The district has a geographic information system (GIS) that maintains cadastral maps and various layers of data, including zip code, facet and aerial photography. The district's website makes a broad range of information available for public access, including detailed information on the appraisal process, property characteristics data, residential sales, certified values, protests and appeal procedures, property maps, and a tax calendar. Downloadable files of related tax information and district forms, including exemption applications and business personal property renditions are also available.

Information Systems

The Information Systems Department maintains the district's data processing facility, software applications, Internet website, and geographical information system. The district operates under a hierarchical non-related database. The mainframe hardware/system software, PACs is provided by True Automation; and the user base is served by general-purpose Desktop and Server PC's, along with terminal emulation to mainframe windows.

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 Division (PTD) conducts a bi-annual property value study (PVS) of each Texas school district and each appraisal district. As a part of this study, the code also requires the Comptroller to: use sales and recognized auditing and sampling techniques; review each appraisal district's appraisal methods, standards and procedures to determine whether the district used recognized standards and practices; test the validity of school district taxable values in each appraisal district and presume the appraisal roll values are correct when values are valid; and, determine the level and uniformity of property tax appraisal in each appraisal district. The methodology used in the property value study includes stratified, samples to improve sample representativeness and techniques or procedures of measuring uniformity. This study utilizes statistical analysis of sold properties (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 category (i.e., categories A, B, C, D and F1 are directly applicable to real property). On alternate

years the comptroller also conducts a Methods and Assistance Program audit to determine if the appraisal performance is in compliance with Uniform Standards of Appraisal Practices and standards set by the International Association of Assessing Officers.

Appraisal Activities

Introduction

Appraisal Responsibilities

The field appraisal staff is responsible for collection and maintaining property characteristic data for classification, valuation, and other purposes. Accurate valuation of real and personal property by any method requires a physical description of personal property, and land and building characteristics. This appraisal activity is responsible for administering, planning and coordination of all activities involving data collection and maintenance of all commercial, residential and personal property types which are located within the boundaries of Brazoria County. The data collection effort involves the field inspection of real and personal property accounts, as well as data entry of all data collected into the existing information system. The goal is to periodically field inspect residential and personal properties in Brazoria County every three years, and commercial properties every year. Meeting this goal is dependent on budgetary constraints.

BCAD has eight school districts within the county boundaries.

- Angleton ISD:
  - Approximately 11,300 improved residential parcels
  - Approximately 880 improved commercial parcels
  - Approximately 5,900 unimproved land parcels
  - Approximately 1,700 agricultural parcels
- Pearland ISD:
  - Approximately 30,400 improved residential parcels
  - Approximately 1,270 improved commercial parcels
  - Approximately 2,790 unimproved land parcels
  - Approximately 130 agricultural parcels
- Alvin ISD:
  - Approximately 40,050 improved residential parcels
  - Approximately 1,780 improved commercial parcels
  - Approximately 7,200 unimproved land parcels
  - Approximately 1,970 agricultural parcels
- Brazosport ISD:
  - Approximately 20,000 improved residential parcels
  - Approximately 1,700 improved commercial parcels
  - Approximately 6,670 unimproved land parcels
  - Approximately 560 agricultural parcels
- Danbury, Damon, Sweeny, and Columbia Brazoria:
  - Approximately 14,020 improved residential parcels
  - Approximately 890 improved commercial parcels
  - Approximately 9,110 unimproved land parcels
  - Approximately 3,260 agricultural parcels

BCAD appraises approximately 11,800 lease and business personal property accounts; BCAD also maintains approximately 42,980 industrial, utility and mineral accounts through contracted appraisal services.

Cities are Alvin, Angleton, Brazoria, Village of Brookside, Clute, Danbury, Freeport, Holiday Lakes, Hillcrest Village, Jones Creek, Lake Jackson, Liverpool, Manvel, Oyster Creek, Pearland, Quintana, Iowa Colony, Village of Bailey's Prairie, Richwood, Village of Surfside, Sweeny and West Columbia.

The Office of the Chief Appraiser is primarily responsible for overall planning, organizing, staffing, coordinating, and controlling of district operations and the oversight of each department's functions. The Appraisal Department is responsible for the valuation of all real and personal property accounts. The appraisal divisions include commercial, residential, business personal, and industrial. The district's appraisers are subject to provisions of the Property Taxation Professional Certification Act and must be duly registered with The Texas Department of Licensing and Regulation.

Brazoria County Appraisal District adheres to a state mandate requiring the application of the principles and practices set forth by Uniform Standards of Professional Appraisal Practice (USPAP). The purpose of USPAP is to promote and maintain a high level of public trust in appraisal practice by establishing requirements for appraisers. It is essential that appraisers develop and communicate their analyses, opinions, and conclusions to intended users of their services in a manner that is meaningful and not misleading.

The Appraisal Standards Board promulgates USPAP for both appraisers and users of appraisal services. The appraiser's responsibility is to protect the overall public trust and it is the importance of the role of the appraiser that places ethical obligations on those who serve in this capacity. USPAP reflects the current standards of the appraisal profession.

> USPAP does not establish who or which assignments must comply. Neither The Appraisal Foundation nor its Appraisal Standards Board is a government entity with the power to make, judge, or enforce law. Compliance with USPAP is required when either the service or the appraiser is obligated to comply by law or regulation. USPAP addresses the ethical and performance obligations of appraisers through Definitions, Rules, Standards, Standard Rules and Statements.
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> - *The DEFINITIONS establish the application of certain terminology in USPAP.*
> - *The ETHICS RULE sets for the requirements for integrity, impartiality, objectivity, independent judgment and ethical conduct.*
> - *The COMPETENCY RULE presents pre-assignment and assignment conditions for knowledge and experience.*
> - *The JURISDICTIONAL EXCEPTION RULE preserves the balance of USPAP if a portion is contrary to law or public policy of a jurisdiction.*
> - *The SUPPLEMENTAL STANDARDS RULE provides the means for government agencies government sponsored enterprises and other entities that establish public policy to augment USPAP.*
> - *The TEN STANDARDS establish requirements for appraisal, appraisal review and appraisal consulting service and the manner in which each is communicated.*
> - *STATEMENTS ON APPRASIAL STANDARDS clarify, interpret, explains or elaborates on a Rule or Standards.*
> - *COMMENTS are an integral part of USPAP and have the same weight as the component they address. These extensions of the DEFINITIONS, RULES and*

STANDARDS RULES provide interpretation and establish the context and conditions for application.

The appraisal of property for property tax purposes is required by the Texas Constitution and statutory law (Article VIII, Sec. 1(b); In addition, Section 26.02 of the Texas Property Tax Code states that all property shall be appraised at 100% of its market value. Finally, Section 403.301 of the Government Code ensures equity among taxpayers in the burden of taxes and among school districts in the distribution of financial aid for public education. This subchapter provides for uniformity in local property appraisal practices and procedures and in the determination of property values. To effectively administer the code, the comptroller conducts a bi-annual study using comparable sales and generally accepted auditing and sampling techniques to determine the total taxable value of all property in the district's boundaries.

The district's market value appraisals are performed pursuant to Article VIII, Sec. 1., Texas Constitution, which provides that property must be taxed in proportion to its value as determined by law. Sec. 23.01, Tax Code.

Appraisal Resources

- **Appraisal Personnel** – The appraisal activities are conducted by appraisers, analytical and technical support personnel as well as data entry personnel. Appraisal staff reports to the Director of Appraisal and Deputy Chief of Appraisal, who report to the Chief Appraiser.

- **Data** – The data used by field appraisers includes the existing property characteristic information contained in Harris True Automation Computer Mass Appraisal System (PAC's). The data is printed on a property record card (PRC), or personal property data sheets. Other data used includes maps, sales data, fire, and damage reports, building permits, photos, and actual cost information.

Fieldwork Reappraisal – includes inspection of properties that typically include remodels, repairs, demolitions generated from permits and properties flagged for re-inspection. Properties are cycled through a three-year reappraisal process. New construction sold properties and/or properties that were the subject of appeal are also part of the field inspection process.

In-House Reappraisal – is based on those market areas and properties that have been targeted to be revalued including, but not exclusive to concentrations of protests, sales, and/or low ratios. The reappraisal in most of these areas can be accomplished utilizing digital aerial photography, street view photography, and statistical data. These are tools recognized and accepted by the International Association of Assessing Officers (IAAO).

PRELIMINARY ANALYSIS

Data Collection/Validation

Data collection of real property involves maintaining data characteristics of the property on computer assisted mass appraisal programs. The information contained includes site characteristics, such as land size and topography, and improvement data, such as square foot of living area, year built, quality of construction, and condition. Field appraisers use listing manuals that establish uniform procedures for the approaches to value and are structured and calibrated based on this coding system. The field appraisers use these manuals during their initial training and as a guide in the field inspection of properties. Data collection for personal property involves maintaining information on a personal property system. The type of information includes personal property such as business inventory, furniture and fixtures, machinery and equipment, cost and location. The field appraisers conduct onsite inspections and use a personal property manual during their initial training and as a guide to correctly list all personal property that is taxable. The listing procedure manuals that are utilized by the field appraisers are available in the district offices. A property owner/agent may request a copy of the listing procedural manual and/or any materials used in field appraisals. Appraisers periodically update the listing manuals with input from the valuation group.

Sources of Data

The sources of data collection are through the new construction field effort, data review/relist field effort, data mailers, hearings, sales validation field effort, commercial sales verification, newspapers and publications, and property owner correspondence, and the Internet. A principal source of data comes from building permits received from taxing jurisdictions. Permits are received and matched manually with the property's tax account number for data entry.

Data review of entire neighborhoods is generally a good source for data collection. Appraisers drive entire neighborhoods to review the accuracy of the district's data and identify properties that have to be relisted. The sales validation effort in real property pertains to the collection of data of properties that have sold.

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's owner's requests to correct data inconsistencies has also increased.
Property accounts identified as possibly being listed with incorrect data are added to a work file and inspected at our 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 personal property. The appraisers are assigned throughout Brazoria County to conduct field inspections. Appraisers conduct field inspections and record information on a property record card (PRC), a personal property data sheet, or a neighborhood profile form.

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 the listing manual as “rules” to follow. Experienced appraisers are routinely re-trained in listing procedures prior to major field projects such as new construction, sales validation, or data review. A quality assurance process exists through supervisory review of the work being performed by the field appraisers. Quality assurance supervision is charged with the responsibility of ensuring that appraisers follow listing procedures identify training issues and provide uniform training throughout the field appraisal staff.

Data Maintenance

The data entry, records and clerical personnel are responsible for all activities involving file building, data entry, customer service and quality assurance.

At a property owner’s request, the district is required to split or combine accounts that are under the same ownership and do not have separate mortgages, which requires the coordination of our customer service department and appraisal staff.

INDIVIDUAL VALUE REVIEW PROCEDURES

Field Review

The data of last inspection, extent of that inspection, and the CAD appraiser responsible are listed on the record. If a property owner or jurisdiction disputes the district’s records concerning this data during a hearing, the record may be altered based on the evidence provided. Typically, 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 data review/re-list field effort.

Office Review

Office reviews are completed on properties where information has been received from the owner of the property or verifiable sources regarding current conditions of the property. When the property data is verified in this manner, field inspections are not required.

Land

Land pricing schedules are divided into neighborhoods according to geographic location based upon market sales analysis. Schedules for the valuation of land are divided into classifications according to geographic location. Land is priced according to this schedule unless it fell into another pricing area that was more specific to that geographic location, i.e., a pricing table for a specific subdivision. Appraisers sometimes determined that the market value of land was not best estimated by using a pricing schedule. Land that had physical characteristics that affect its usefulness, such as severe erosion, lack of public access, and other outside physical or economic factors, are adjusted for such. The district-maintained schedules for deviation from typical land schedules. Other variations from the pricing schedules can utilize a “flat value” method.

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

the acreage ranges and costs stored in the table. For example, if a land cost for 10 acres was $2,000/acre and the land cost for 20 acres was $1,000, then the appraised cost for a 15-acre tract was estimated at the interpolated cost of $1,500/acre (because it was exactly halfway between the two data points).

Improvements

The word *improvement denotes* buildings and other structures on and to land. Appraisal models that categorized structures according to construction type, quality, and intended use. These appraisal models were developed and are modified for local markets (neighborhoods). General categories include schedules for:

- Site Built Single Family Homes
- Manufactured Homes
- Multi-Purpose Buildings
- Commercial Structures
- Miscellaneous Improvement

Consideration is made of the effects of:

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

. The district also maintains percent good tables to estimate depreciation on structures based on their age (or effective age) and condition as rated by physical inspection. Additional consideration was sometimes given for a loss of value due to external economic factors which have an adverse effect on the property. These allowances for economic or functional obsolescence were made on a case-by-case basis and were the expressed professional opinion of the reviewing appraiser.

Consideration was also given to structures that were incomplete. The district developed a schedule that estimates the degree of completion based upon the presence/absence of various building components. Reasons for the extra allowances were noted on the parcel record in the district's CAMA system.

PERFORMANCE TEST

The valuation appraisers are responsible for conducting ratio studies and comparative analysis. Ratio studies are an important tool to examine how close appraised values are to market values. The ratio study includes, but it is not exclusive to, available sales data, independent, expert appraisals, considerations.

Field appraisers, in many cases may conduct field inspections to ensure the ratios produced are accurate and the appraised values utilized are based on accurate property data characteristics.

Quality control is maintained in several random samplings of field work, data entry and loss/gain analysis. In addition, random sampling of the daily change log is done to identify sources of potential error.

Survey of Similar Jurisdictions: Brazoria CAD coordinates its discovery and valuation activities with adjoining Appraisal Districts. Numerous field trips, interviews and data exchanges with adjacent appraisal districts have been conducted to ensure compliance with state statues. In addition, Brazoria CAD administration and personnel interact with other assessment officials through professional trade organizations including the International Association of Assessing Officers, Texas Association of Appraisal Districts and its subchapter Texas Metropolitan Association of Appraisal Districts and the Texas Association of Assessing Officers.

The district is participating in the 2022 Property Value Study. To view the district's most recent study or any previous studies go to:
https://comptroller.texas.gov/taxes/property-tax/pvs/index.php

Residential Valuation Process

Scope of Responsibility

VALUATION APPROACH

Area Analysis

Data on regional economic forces such as demographic patterns, regional locational factors, employment and income patterns, general trends in real property prices and rents, interest rate trends, availability of vacant land, and construction trends and costs are collected from private vendors and public sources and provide the field appraiser a current economic outlook.

New Construction

The field inspection of new construction permits and work file accounts began in December 2017 and was substantially completed by the end of March 2022. Appraisers visit all property where changes to characteristics are identified through building permits and other sources. All changes in characteristics are recorded, including new homes, additions, remodels, pools and other yard improvements, demolitions, and disaster damage and repairs.

Neighborhood and Market Analysis

Neighborhood analysis involves the examination of how physical, economic, governmental, and social forces and other influences affect property values. The effects of these forces are also used to identify, classify, and stratify comparable properties into smaller, manageable subsets of the universe of properties known as neighborhoods. Residential valuation and neighborhood analysis is conducted on 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 "neighborhood" for analysis purpose 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 and condition of dwellings, square footage of living area, and story height. Delineation can involve the physical drawing of neighborhood boundary lines on a map, but it can also involve statistical separation or stratification based on attribute analysis. Part of neighborhood analysis is the consideration of discernible patterns of growth that influence a neighborhood’s individual market. 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 of residential character and proximity to the workplace and other community facilities. The period of decline reflects diminishing demand or desirability. During decline, general property use may change from residential to a mix of residential and commercial uses. Declining neighborhoods may also experience renewal, reorganization, rebuilding, or restoration, which promotes increased demand and economic desirability.

Neighborhood identification and delineation is the cornerstone of the residential valuation system at the district. All the residential analysis work done in association with the residential valuation process is neighborhood specific. Neighborhoods are field inspected and delineated based on observable aspects of homogeneity. Neighborhood delineation is periodically reviewed to determine if further neighborhood delineation is warranted.

Whereas neighborhoods involve similar properties in the same location, a neighborhood group is simply defined as similar neighborhoods in similar locations. Each residential neighborhood is assigned to a neighborhood group based on observable aspects of homogeneity between neighborhoods. Neighborhood grouping is highly beneficial in cost-derived areas of limited or no sales or used in direct sales comparison analysis.

Neighborhood groups (delineated), or clustered neighborhoods, increase the available market data by linking comparable properties outside a given neighborhood. Sales ratio analysis is performed on a neighborhood basis, and in soft sale areas on a neighborhood group basis.

Highest and Best Use Analysis

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

The highest and best use of residential property is normally its current use. This is due in part to the fact that residential development, in many areas, through use of dead 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 the older, non- remodeled homes are economic misimprovements, 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.

Previous to the addition of 23.01(d) concerning residential homesteads, there was no specific statute defining highest and best use as it applies in appraisals conducted under the Tax Code. However, Texas courts have acknowledged that highest and best use is a factor that must be considered in determining market value. King v. Real 466 S.W.2d 1 TEX.Civ.App., 1971, Exxon Pipeline Co. v. Zwahr 2002 WL 1027003 Tex., 2002. In an unpublished opinion, the Houston Court of Appeals approved the following definition of highest and best use:

"Highest and best use" is the reasonably probable and legal use of vacant land or an improved property, which is physically possible, appropriately supported, financially feasible, and results in the highest value. The four criteria the highest and best use must meet are legal permissibility, physical possibility, financial feasibility, and maximum profitability. Clear Creek Drainage Dist. of Galveston County v. Manison Not Reported in S.W.3d Tex.App.-Houston [14 Dist.], 1997.

With the *exception of some residence homesteads*, this definition of highest and best use still applies to appraisals conducted under the Tax Code.

The Texas Legislature amended the way certain properties are valued: dictating that homesteads in commercial areas are appraised as ***value in use*** instead of highest and best use.

VALUATION AND STATISTICAL ANALYSIS (Model Calibration)

Cost Schedules

All residential parcels in the district are valued from identical cost schedules using a comparative unit method. The district's residential cost schedules, originally adopted from a private mass appraisal firm, have been customized to fit Brazoria County's local residential building and labor market. The cost schedules are reviewed regularly as a result of state legislation requiring that the appraisal district cost schedules be within a range of plus or minus 10 % from nationally recognized cost schedules.

The district's residential building schedules are adjusted to keep up with rising construction costs. However, an extensive review and revision of the residential cost schedule will again be performed for the 2023 appraisal year. As part of this process, a large number of newly constructed sold properties at various levels of quality of construction in Brazoria County were reviewed. The property data characteristics of these properties were verified. From these samples, an appropriate amount was selected for use in the schedule cost system review. Brazoria CAD dwelling costs were compared against Marshall & Swift, a nationally recognized cost estimator. This process included correlation of quality of construction factors from CAD and Marshall & Swift. The results of this comparison were analyzed and a review of building costs to land sale prices made. As a result, new multipliers were developed to be used in the district's cost process. These new multipliers were used to adjust the division's cost schedule to be in compliance with the state legislative mandate described above. In addition to the cost schedules, applications have been created to address unique appraisal situations,

such as different levels of remodeling and atypical housing features not normally accounted for in the benchmark cost system.

Sales Information

A sales file for the storage of data at the time of sale is maintained. Residential improved and vacant land sales, along with commercial improved and vacant land sales are maintained in a separate sales information system. Residential improved and vacant sales are collected from a variety of sources, including district questionnaires sent to buyer and seller, field discovery, protest hearings, various sale vendors, builders and realtors. A system of type, source, validity, and verification codes was established to define salient facts related to a property's purchase or transfer. School district or neighborhood sales reports are generated as an analysis tool for the appraiser in the development of value estimates.

FORECLOSURE ANALYSIS- The district is responsible for researching sales and determining if the transaction is arm's length prior to the inclusion in market analysis. Sales must meet a set of criteria to be considered a market indicator. Recent changes in law mandate that districts now include for consideration foreclosed properties. Foreclosures are reviewed to determine the time on the market, exposure to the market and any allowances made by the buyer and/or seller. The condition of the property is also estimated at the time of sale and as of January 1st. As with any market transaction outlier sales that could skew valid findings are suppressed from the analysis.

Land Analysis

Residential land analysis is conducted by the land appraisers. The appraisers develop a base lot, primary rate, and assign each unique neighborhood to one of several prices per square foot land tables. The square foot land table is designed to systematically value the primary and residual land based on a specified percentage of the primary rate. A computerized land table files stores the land information required to consistently value individual parcels within neighborhoods. Land classifications are provided by the comptroller's office; however, an in-house classing system is used in conjunction to establish highest and best use for the land. Specific land influences are used, where necessary, to adjust parcels outside the neighborhood norm for such factors as view, shape, size, and topography, among others. The appraisers 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. Approximately 500 raw land sales were used to verify and/or adjust land tables with sale dates ranging from January 1, 2020, to January 1, 2022. Adjustments for specific land influences are used when necessary, to adjust parcels outside the market area's norm for such factors as view, shape, size, topography, and any other prevalent characteristics.

Statistical Analysis

The residential valuation appraisers perform statistical analysis periodically to evaluate whether values are equitable and consistent with the market. Ratio studies are conducted on each of the approximately 1,000 residential valuation neighborhoods in the district to judge the two primary aspects of mass appraisal accuracy—level and uniformity of value. Appraisal statistics of central tendency and dispersion generated from sales ratios are available for each stratified neighborhood within an ISD and summarized by year. These summary statistics including, but not limited to, the weighted mean, median, standard deviation, coefficient of variation, and coefficient of dispersion provide the appraisers a tool by which to determine both the level and uniformity of appraised value on a stratified neighborhood basis. The level of appraised values is determined by the weighted mean for individual properties within a neighborhood, and a comparison of neighborhood weighted means reflect the general level of appraised value between comparable neighborhoods. Review of the standard deviation, coefficient of variation, and coefficient of dispersion discerns appraisal uniformity within and between stratified neighborhoods.

Every “neighborhood” is reviewed annually by analysts through the sales ratio and profiling 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 appraiser an excellent means of judging the present level of appraised value and uniformity of the sales. The appraiser, based on the sales ratio statistics and designated parameters for valuation update, makes a preliminary decision as to whether the value level in a neighborhood needs to be updated in an upcoming reappraisal, or whether the level of market value in a neighborhood is at an acceptable level.

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 cost model.

The following equation denotes the hybrid model used:

$$MV = MA\ [LV + (RCN - D)]$$

Whereas the market value equals the market adjustment factor times the land value plus the replacement cost new less depreciation. 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. Market or location adjustments are applied uniformly within neighborhoods to account for locational variances between market areas or across a jurisdiction.

If a neighborhood is to be updated, the appraiser uses a cost ratio study that compares recent sales prices of properties appropriately adjusted for the effects of time within a delineated neighborhood with the properties appropriately adjusted for the effects of time within a delineated neighborhood 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 prices indicates the neighborhood level of value based on the unadjusted cost value for the sold properties. This cost-to-sale ratio is compared to the appraisal-to-sale ratio to determine the market adjustment factor for each neighborhood. This market adjustment 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 market adjustment factor will reflect the market influences and conditions only for the specified neighborhood, thus producing more representative and supportable values. The market adjustment factor calculated for each update neighborhood is applied uniformly to all properties within a neighborhood. Once the market-trend factors are applied, a second set of ratio studies is generated that compares recent sale prices with the proposed appraised values for these sold properties. From this set of ratio studies, the appraiser judges the appraisal level and uniformity in both update and non-update neighborhoods, and finally, for the entire school district.

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;
  + 10 percent for each year since the property was re-appraised;
  + the value of any improvements added since the last re-appraisal.

Values of capped properties must be recomputed annually. If a capped property sells, the cap automatically expires as of January 1st of the following year. In that following year, that home is reappraised at its market value to bring its appraisal into uniformity with other properties. An analogous provision applies to new homes. While a developer owns them, unoccupied residences are appraised as part of an inventory using the district’s land value and the developer’s construction costs as of the valuation date. However, in the year following sale, they are reappraised at market value.

INDIVIDUAL VALUE REVIEW PROCEDURES

Field Review

The appraiser identifies individual properties in critical need of field review through sale ratio analysis. Sold properties with a high variance in sales ratios are field reviewed to check for accuracy of data characteristics.

As the district’s parcel count has increased through new home construction, and the homes constructed in the late 70’s and early 80’s experience remodeling, the appraisers are required to perform the field activity associated with transitioning and high demand neighborhoods. Increased sales activity has also resulted in a more substantial field effort on the part of the appraisers to review and resolve sales outliers. Additionally, the appraiser frequently field reviews subjective data items such as quality of construction, condition, and physical, functional and economic obsolescence, factors contributing significantly to the market value of the property. After preliminary estimates of value have been determined in targeted areas, the appraiser takes valuation documents to the field to test the computer-assisted values against his own appraisal judgment. During this review, the appraiser is able to physically inspect both sold properties and unsold properties for comparability and consistency of values. For 2022, re-inspections were focused on flooded areas of the county in addition to 2,600 next appraisal assignments and approximately 2,500 permits for new construction.

In-House reappraisals are based on those market areas and properties that have been targeted to be revalued including, but not exclusive to concentrations of protests, sales and/or low ratios as well as old dates. The reappraisal in these areas was accomplished utilizing digital aerial photography, street view photography and statistical data. These are tools recognized and accepted by the International Association of Assessing Officers.

Office Review

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. The dollar amount and percentage of value differences are noted for each property within a delineated neighborhood allowing the appraiser to identify, research and resolve value

anomalies before final appraised values are released. Previous values resulting from a hearing protest are individually reviewed to determine if the value remains appropriate for the current year.

Once the appraiser is satisfied, with the level and uniformity of value for each neighborhood within his area of responsibility, the estimates of value go to noticing.

PERFORMANCE TESTS

Sales Ratio Studies

The primary analytical tool used by the appraisers to measure and improve performance is the ratio study. The district ensures that the appraised values that it produces meet the standards of accuracy in several ways. Overall ratios are generated for each ISD by quarter 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 neighborhood descriptive statistic, along with frequency distributions and scatter diagrams are reviewed for each neighborhood being updated for the current tax year. In addition, comparative sales ratios by school district and/or specific entity are produced periodically to ensure a level of appraisal value and uniformity. The PC-based ratio studies are designed to emulate the findings of the state comptroller's annual property value study for category A property. A sample copy of the district's ratio study is attached.

Management Review Process

Once the proposed value estimates are finalized, the appraiser reviews the sales ratios by neighborhood and presents pertinent valuation data, such as, history of hearing protest, sale-to-parcel ratio, and level of appraisal to the Chief Appraiser for final review and approval. This review includes comparison of level of value between related neighborhoods within and across jurisdiction lines. The primary objective of this review is to ensure that the proposed values have met preset appraisal guidelines appropriate for the tax year in question.

Commercial Valuation Process

Appraisal Responsibility

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

Appraisal Resources

Personnel – The improved real property appraisal responsibilities are categorized according to major property types of multi-family or apartment and hotels which are appraised using income analysis; office, retail, warehouse, and special use valuations are determined after review of all

three approaches – income, market and cost; Five appraisers are assigned to improved commercial property types. One appraiser is assigned to the land valuation responsibilities.

Data – The data used by the commercial appraiser includes verified sales when available 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 are also reviewed to provide additional support market trends. An integrated Marshall & Swift estimator is used for all commercial cost calculations.

PRELIMINARY ANALYSIS

Comparison Study

Comparison studies are utilized to test new or existing procedures or valuation models in a limited area of the district. These studies are considered when substantial changes are made and may include analysis of ratio studies and independent appraisals. The studies help the appraiser determine whether a system is producing accurate and reliable values or whether procedural modifications are required. The approach implements this methodology when developing both the cost approach and income approach models.

VALUATION APPROACH (Model Specification)

Area Analysis

Data on regional economic forces such as demographic patterns, regional locational factors, employment and income patterns, general trends in real property prices and rents, interest rate trends, availability of vacant land, and construction trends and costs are collected from private vendors and public sources. Continuing education remains a priority in the form of IAAO, Texas Association of Assessing Officers (TAAO), and Texas Association of Appraisal Districts (TAAD).

Comparable Analysis

The grouping of similar land area and commercially classed properties located within the boundaries of this taxing jurisdiction is considered. This analysis involves the examination of how physical, economic, governmental and social forces and other influences affect property values. The effects of these forces are also used to identify, classify, and organize comparable properties into smaller, manageable subsets of the universe of comparables. In the mass appraisal of commercial properties these subsets of a universe of properties are generally referred to as market areas or economic areas.

Economic areas are defined by each of the improved property use types (apartment, office, retail, warehouse, and special use) based upon an analysis of similar economic or market forces. These include but are not limited to similarities of rental rates, classification of projects (known as building class by area commercial market experts), date of construction, overall market activity or other pertinent influences. Economic area identification and delineation by

each major property use type is the benchmark of the commercial valuation system. All income model valuation (income approach to value estimates) is economic area specific. Economic areas are periodically reviewed to determine if redelineation is required.

Highest and Best Use Analysis

The highest and best use is the most reasonable and probable use that generated 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, warehouses, light industrial, special purpose, or interim uses. In many instances, the property's current use is the same as its highest and best use. This analysis ensures that an accurate estimate of market value (sometimes referred to as value in exchange) is derived.

Value in use represents the value of a property to a specific user for a specific purpose. This is significantly different than market value, which approximates market price under the following assumptions: (i) no coercion of undue influence over the buyer or seller in an attempt to force the purchase or sale, (ii) well-informed buyers and sellers acting in their own best interests, (iii) a reasonable time for the transaction to take place, and (iv) payment in cash or its equivalent.

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, capitalization rate studies are analyzed.

DATA COLLECTION / VALIDATION

Data Collection Manuals

The primary manuals pertinent to data collection and documentation are the Commercial Manual and Marshall & Swift cost estimation. These procedural tools are continually updated, providing a uniform system of itemizing the multitude of components comprising improved properties. All properties located in Brazoria CAD's inventory are coded according to Marshall Swift guidelines and the approaches to value are structured and calibrated based on the coding systems. The most recent revision of the commercial manual was 2007. Marshall & Swift, which has been adapted to PAC's, is updated 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 summarized and produced into a spread sheet format. The confirmed sales reports, known as the Commercial Improved and Vacant Land sales, categorize the sales by property and use type, and sort the data by location and

chronological order. These sales are available to the public for use during hearings and are also used by the Brazoria CAD appraisers during the hearings process.

Sources of Data

In terms of commercial sales data, Brazoria CAD receives a copy of the deeds recorded in Brazoria County that convey commercially classed properties. The deeds involving a change in commercial ownership are entered into the sales information system and researched in an attempt to obtain the pertinent sale information. Other sources of sale data include the hearings process and local, regional and national real estate and financial publications, and various Internet resources. Third party vendors such as Co-Star, LoopNet, etc. are utilized.

For those properties involved in a transfer of commercial ownership, a sale file is produced which begins the research and verification process. The actual closing statement is the most reliable and preferred method of sales verification.

VALUATION ANALYSIS (Model Calibration)

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

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 adapted through PAC's. 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 a period time. Because a national cost service is used as a basis for cost models, locational modifiers are necessary to adjust these base costs specifically for Brazoria County.

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. The actual and effective ages of improvements are recorded. Effective age estimates are based on the utility of the improvements relative to where the improvement lies on the scale of its total economic life and its competitive position in the marketplace. Effective age estimates are based on several levels of renovation and are described in the Commercial Manual.

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 through ratio studies or other market analysis. 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.

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 approach pertains to the estimation of market rent on a per unit basis. This is derived primarily from actual rent data furnished by property owners and from local market study publications. This per unit rental rate multiplied by the number of units results in the estimate of potential gross rent.

A vacancy and collection loss allowance is the next item to consider in the income approach. The projected vacancy and collection loss allowance is established from actual data furnished by property owners and 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 a secondary income or service income is calculated as a percentage of stabilized effective gross rent. Secondary income represents parking income, escalations, reimbursements, and other miscellaneous income generated by the operations of real property. The secondary income estimate is derived from actual data collected and available market information. The secondary income estimate is then added to effective gross rent to arrive at an effective gross income.

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 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 non-recoverable expenses and replacement reserves) from the effective gross income yields and 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. The 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 investment.

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 allowance (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.

Sales Comparison (Market) Approach

Although all three of the approaches to value are based on market data, the Sales Comparison Approach is most frequently referred to as the Market Approach. This approach is utilized not only for estimating land value but also in comparing sales of similarly improved properties to 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 the depreciation schedules in the Cost Approach, rates and multipliers used in the Income Approach, and as a direct comparison in the Sales Comparison Approach. Improved sales are also used in ratio studies, which afford the appraiser an excellent means of judging the present level and uniformity of the appraised values.

Final Valuation Schedules

Based on the market data analysis and review discussed previously in the cost, income and sales approaches, the cost and income models are calibrated and finalized. The calibration results are keyed to the schedules and models for utilization on all commercial properties in the district. The schedules and models are summarized in the Commercial Manual. This manual is provided to appraisers and is made available to the public.

Statistical and Capitalization Analysis

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

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

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 non-recoverables and replacement reserves), net opening income and capitalization rate and multipliers are continuously reviewed utilizing frequency distribution methods or other statistical procedures of 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.

INDIVIDUAL VALUE REVIEW PROCEDURES

Field Review

The date of last inspection, extent of that inspection, and the Brazoria CAD appraiser responsible are listed in the system. If a property owner disputes the district's records concerning this data during a protest hearing, the records may be altered based on the credibility of the evidence provided. Typically, a new field check is requested to verify this evidence for the current year's valuation or for the next year's valuation. In addition, if a building permit is filed for a particular property indicating a change in characteristics, that property is added to a work file. Finally, even though every property cannot be inspected each year, each appraiser typically designates certain segments of their area of responsibility to conduct field checks. Re-inspections were focused on areas impacted by the 2016 and 2017 storms and subsequent flooding.

For the 2022 reappraisal year, areas with significant commercial growth were reworked as well as in Columbia/Brazoria ISD, Sweeny ISD, and Angleton ISD. Commercial appraisers are somewhat limited in the time available for field review as all commercial properties of a specific use/type may be appraised using an Income methodology. 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 sales 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 completed on properties not subject to field inspections and are preformed in compliance with the guidelines contained in the Commercial Manual. The manual also outlines the application of the three approaches to value (including Discounted Cash Flow – DCF). 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 (two-year value history) 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 three-year sales history (USPAP property history requirement for non-residential property).

The appraiser may review methodology for appropriateness to ascertain that it was completed in accordance with USPAP or more stringent statutory and district policies. This review is performed after preliminary ratio statistics have been applied. If the ratio statistics are generally acceptable overall the review process is focused primarily on locating skewed results on an individual basis. Previous values resulting from protest hearings are individually reviewed to determine if the value remains appropriate for the current year based on market conditions. Each appraiser's review is limited to properties in their area of responsibility by property type (improved) of 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 estimate of value goes to noticing. Each parcel is subjected to the value parameters appropriate for its use type. If one of the parcel's component values, land value, improvement value or total value exceeds the permissible change in value range it "fails the value edits". In this case, the parcel does not shift to noticing, but it is placed on a rework list. Therefore, although the value estimates are determined in a computerized mass appraisal environment, value edits and rework lists enable an individual parcel review of value anomalies before the estimate of value is released for noticing.

PERFORMANCE TESTS

The primary tool used to measure mass appraisal performance is the ratio study. A ratio study compares appraised values to market value. 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 value 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.

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

Industrial Valuation Process

Appraisal Responsibility

The industrial appraisers contracted through Brazoria County Appraisal District are responsible for developing fair, uniform market values for improved industrial properties and industrial vacant land. The industrial appraiser is also responsible for the valuation of all tangible general industrial personal property in Brazoria County.

Business Personal Property Valuation Process

Appraisal Responsibility

There are four different personal property types appraised by the district's personal property section: Business Personal Property accounts; Leased Assets; Vehicles, and Multi-Location Assets.

Appraisal Resources

- **Data –** A common set of data characteristics for each personal property account in Brazoria County is collected in the field and data entered to the district's computer. The property characteristic data drives the computer-assisted personal property appraisal system. The personal property appraisers collect the field data and are responsible for data entry.

  VALUATION APPROACH (Model Specification)
  Analysis

  Six-digit numeric codes, called NAICS codes that were developed by the federal government, are used by Brazoria CAD as a way to classify personal property by business type uses. Brazoria CAD has further stratified these codes by adding alpha suffixes to SIC codes in order to group business types that have similar personal property characteristics.

DATA COLLECTION/VALIDATION

Data Collection Procedures

Personal property data collection procedures are published and distributed to all appraisers involved in the appraisal and valuation of personal property. The appraisal procedures are reviewed and revised to meet the changing requirements of field data collection.

Sources of Data

Business Personal Property

The district's property characteristic data was originally received from the 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. When revaluation activities permit, district appraisers collect new data via an annual field drive-out. This project results in the discovery of new businesses not revealed through other sources. Various discovery publications such as Dunn & Bradstreet and state sales tax listings are also used to discover 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 Brazoria CAD with a listing of vehicles within Brazoria County. The vendor develops this listing from the Texas Department of Transportation (DOT) Title and Registration Division records. Other sources of data include property owner renditions and field inspections.

Manufactured Homes

Manufactured homes registered as personal property are valued using pricing schedules based on NADA Mobile Home Cost Guide cost schedules. Mobile homeowners that qualified the structure as a residence homestead were allowed the same value increase limitation as site-built single family homestead properties.

VALUATION AND STATISTICAL ANALYSIS (Model Calibration)

Cost Schedules

Cost schedules are developed by analyzing cost data from property owner renditions, hearings, state schedules, and published cost guides. The cost schedules are reviewed as necessary to conform to changing market conditions. The schedules are typically in a price per square foot format, but some exception SIC's are in an alternate price per unit format, such as per room for hotels.

Depreciation Schedule and Trending Factors:

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

PVF = INDEX FACTOR x PERCENT GOOD FACTOR

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

MARKET VALUE ESTIMATE = PVF x HISTORICAL COST

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

Computer Assisted Personal Property Appraisal

Computer assisted valuation process has two main objectives: 1) Analyze and adjust existing SIC models. 2) Develop new models for business classifications not previously integrated into the system. The delineated sample is reviewed for accuracy of SIC code, square footage, field data, and original cost information. Models are created and refined using actual original cost data to derive a typical replacement cost new (RCN) per square foot for a specific category of assets. The RCN per square foot is depreciated by the estimated age using the depreciation table adopted for the tax year.

The data sampling process is conducted in the following order: 1) Prioritizing Standard Industrial Classification (SIC) codes for model analysis. 2) Compiling the data and developing the reports. 3) Field checking the selected samples. The models are built and adjusted using internally developed software. The models are then tested against the previous year's data. The typical RCN per square foot (or applicable unit) is determined by a statistical analysis of the available data.

These 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 the prior years' data exists or for which current 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 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.

INDIVIDUAL VALUE REVIEW PROCEDURES

Office Review

Business Personal Property

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

Vehicles

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 if reported by the property owner electronically. Electronic renditions, usually on diskette, often require reformatting before they can be loaded to the account. Accounts that render by hard copy are data entered by CAD.

After matching and data entry, reports are generated and reviewed by an appraiser. Once proofed, the report is then mailed to the property owner for review. Corrections are made and the account is noticed after supervisor approval.

Internal Testing

Brazoria CAD can test new or revised cost and depreciation schedules by running the valuation program in a test mode prior to the valuation cycle. Cost schedules are compared to both market data and Marshall & Swift Cost Estimator data. Refinements to the schedules are made if necessary.

For additional information regarding BCAD - visit the BCAD website at www.brazoriacad.org

STAFF PROVIDING SIGNIFICANT ASSISTANCE
IN COMPLETING THE
MASS APPRAISAL REPORT

Chief Appraiser Marcel Pierel

Preston Brown, Deputy Chief of Appraisal
Nancy Ashburn, Director of Appraisal Operations
Steven Holtz, Special Projects Manager & AG Supervisor
Kelia Gartman, Residential Supervisor
Criselda Del Hierro, Commercial Manager
Sharon Cooley, BPP Supervisor
Callie Haynes, Land Supervisor
Jasmine Ling, Analyst

Residential Appraisers: Amber Rios, RPA; Elontria Mata, RPA; Jennifer Warren, RPA; Patrick Whittenburg, RPA; Amber Seprevivo, RPA; Julie Torres, RPA; Karina Villa, Level I; Danielle Pye Level I; Amanda Ramirez, RPA; Rosa Cabrera, Level III;

Commercial Appraisers: , Carla Heath, RPA; Leslie Taggart, Level III; Alma Miller, RPA;

Land Appraiser: Pandora Paez, Level II; AG: Lisa Lopez, Level II; George Morgan (Lister)

BPP: Allison Davis, Level IV; Carol Randall, Level IV; Cynthia Dunbar, Level I;

Industrial/Mineral Appraisers: (contracted) Hugh Landrum & Associates

Certification Statement:

- **The statements of fact contained in this report are true and correct.**
- **The reported analyses, opinion, and conclusions are limited only by the reported assumptions and limiting conditions, and are impartial, and unbiased professional analyses, opinions, and conclusions.**
- **There is no (unless previously disclosed to Brazoria CAD) present or prospective interest in the property that is the subject of this report.**
- **There is no bias with respect to any property that is the subject of this report or to the parties involved with this assignment.**
- **Engagement in this assignment was not contingent upon developing or reporting predetermined results.**
- **Compensation for completing this assignment is not contingent upon the reporting of a predetermined value or direction in value.**
- **Analyses, opinions, and conclusions were developed, and this report has been prepared, in conformity with the Uniform Standards of Professional Appraisal Practice and in compliance with the IAAO Standard on Ratio Studies and Mass Appraisal Report.**