Harris Central Appraisal District

2025 Mass Appraisal Report

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Introduction

Scope of Responsibility

The Harris Central Appraisal District (HCAD) has prepared and published this report to provide our citizens, taxpayers, and taxing jurisdictions with a better understanding of the district's responsibilities and activities. This mass appraisal report was written in compliance with Standard Rule 6 of the Uniform Standards of Professional Appraisal Practice (USPAP) as promulgated by the Appraisal Standards Board of The Appraisal Foundation. This report has several parts: a general introduction and then several sections describing information specific to particular appraisal divisions.

The 2025 mass appraisal report was prepared under the provisions of the Texas Property Tax Code (hereafter "Tax Code"). Taxing jurisdictions that participate in the district must use the appraisals as the basis for imposition of property taxes. The State of Texas allocates state funds to school districts based upon the district's appraisals, as tested and modified by the state comptroller of public accounts.

The 2025 mass appraisal report results in an estimate of the market value of each taxable property within the district's boundaries. Where required by law, the district also estimates value on several bases other than market value. These are described where applicable later in this report.

General Assumptions and Limiting Conditions

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

- The appraisals were prepared exclusively for ad valorem tax purposes.
- The property characteristics data upon which the appraisals are based is assumed to be correct.
- Physical inspections of the property appraised were performed as staff resources and time allowed.
- Validation of sales transactions occurred through questionnaires to buyer and seller, telephone survey, and field review. In the absence of such confirmation, residential sales data obtained from vendors was considered reliable.
- No responsibility is assumed for the legal description or for matters including legal or title considerations. The title to any property is assumed to be good and marketable, unless otherwise stated.
- All property is appraised as if free and clear of any or all liens or encumbrances, unless otherwise stated. All taxes are assumed to be current.
- All property is appraised as though under responsible, adequately capitalized ownership and competent property management.
- All engineering is assumed to be correct. Any plot plans and/or illustrative material contained with the appraisal records are included only to assist in visualizing the property.
- It is assumed that there is full compliance with all applicable federal, state and local environmental regulations and laws unless noncompliance is stated, defined and considered in this mass appraisal report.
- It is assumed that all applicable zoning and use regulations and restrictions have been

complied with unless nonconformity has been stated, defined and considered in this mass appraisal report.

- It is assumed that all required licenses, certificates of occupancy, consents or other legislative or administrative authority from any local, state or national government or private entity or organization have been or can be obtained or renewed for any use on which the value estimate contained in this report is based.
- It is assumed that the utilization of the land and improvements of the properties described are within the boundaries or property lines, and that there are no encroachments or trespasses unless noted on the appraisal record.

Unless otherwise stated in this report, the appraiser is not aware of the existence of hazardous substances or other environmental conditions. The value estimates are predicated on the assumption that there is no such condition on or in the property or in such proximity thereto that it would cause a loss in value. No responsibility is assumed for any such conditions, or for any expertise or engineering knowledge required to discover them.

Effective Date of Appraisal and Date of the Report

With the exception of certain inventories for which the property owner has elected a valuation date of September 1, 2024, all appraisals are as of January 1, 2025. The date of this report is June 12, 2025.

Definition of Value

Except as otherwise provided by the Tax Code, all taxable property is appraised at its "market value" as of January 1. 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 purchaser know of all the uses and purposes to which the property is adapted and for which it is capable of being used and of the enforceable restrictions on its use, and;
- both the seller and purchaser seek to maximize their gains, and neither is in a position to take advantage of the exigencies of the other.

The Tax Code defines special appraisal provisions for the valuation of several different categories of property. Specially appraised property is taxed on a basis other than market value as defined above. These categories include residential homestead property (Sec. 23.23, Tax Code), agricultural and timber property (Chapter 23, Subchapters C, D and E, Tax Code), real and personal property inventory (Sec. 23.12, Tax Code), certain types of dealer inventory (Sec. 23.121, 23.124, 23.1241 and 23.127, Tax Code), and nominal (Sec. 23.18, Tax Code) or restricted use properties (Sec. 23.83, Tax Code).

Properties Appraised

This mass appraisal appraised all taxable real and personal property known to the district as of the date of this report, with the exception of certain properties on which valuation was not complete as of the date of this report. These, by law, will be appraised and supplemented to the jurisdictions after equalization. The property rights appraised were fee simple interests, with the exception of leasehold interests in property

exempt to the holder of the property's title. The latter are appraised under a statutory formula described in Sec. 25.07, Tax Code. The description and identification of each property appraised is included in the appraisal records submitted to the Harris County Appraisal Review Board (ARB) on May 9, 2025.

Scope of Work Used to Develop the Appraisal

This mass appraisal valued all taxable real and tangible personal property within the boundaries of HCAD, which encompasses all of Harris County, Texas, including the City of Houston. This involves 1.8 million parcels. The district is the third largest assessment entity by population and the second largest by parcel count in the United States. The district distributes the work of the appraisal among several appraisal divisions. The following sections describe, by division, the scope of work performed and those items addressed in USPAP Standard 5.

The Chief Appraiser, who is the chief executive officer of the appraisal district, manages the district. The district is subdivided into divisions who report directly to either the Chief Appraiser or the Deputy Chief Appraisers. The appraisal divisions are responsible for all appraisal activities. The support services division is responsible for property records maintenance, taxpayer information and assistance and support of the ARB. The administration division is responsible for budget and financial matters. Information technology operates the district's computer facilities. Property tax professionals are required to be registered with the Texas Department of Licensing and Regulation.

The appraisal district staff consists of 642 employees with the following classifications:

- 104 Official/Administrator
- 293 Professional
- 47 Technicians
- 163 Administrative Support
- 10 Protective Services
- 25 Paraprofessionals

While the appraisal district staff conducted most of the appraisal activities, the district received significant assistance from three appraisal contract firms. The appraisal district's boundaries are the same as the county's boundaries. An adjoining appraisal district is involved only in cases where the property is actually split by the county line. If the county line does split your property, you will receive value notices from the appraisal districts for both counties, and must file homestead exemption or agricultural productivity value applications with both. In such cases, if you choose to file a value protest, you must do so with the ARB in both counties.

Determination of Highest and Best Use for Real Property

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 implements this provision as follows:

> ***§ 23.01. Appraisals Generally***
> (a) Except as otherwise provided by this chapter, all taxable property is appraised at its market value as of January 1.

> (b) The market value of property shall be determined by the application of generally accepted appraisal methods and techniques. If the appraisal district determines the appraised value of a property using mass appraisal standards, the mass appraisal standards must comply with the Uniform Standards of Professional Appraisal Practice. The same or similar appraisal methods and techniques shall be used in appraising the same or similar kinds of property. However, each property shall be appraised based upon the individual characteristics that affect the property's market value, and all available evidence that is specific to the value of the property shall be taken into account in determining the property's market value.
>
> (c) Notwithstanding Section 1.04(7)(C), in determining the market value of a residence homestead, the chief appraiser may not exclude from consideration the value of other residential property that is in the same neighborhood as the residence homestead being appraised and would otherwise be considered in appraising the residence homestead because the other residential property:
>
> (1) was sold at a foreclosure sale conducted in any of the three years preceding the tax year in which the residence homestead is being appraised and was comparable at the time of sale based on relevant characteristics with other residence homesteads in the same neighborhood; or
>
> (2) has a market value that has declined because of a declining economy.
>
> (d) The market value of a residence homestead shall be determined solely on the basis of the property's value as a residence homestead, regardless of whether the residential use of the property by the owner is considered to be the highest and best use of the property.
>
> (e) Notwithstanding any provision of this subchapter to the contrary, if the appraised value of property in a tax year is lowered under Subtitle F, the appraised value of the property as finally determined under that subtitle is considered to be the appraised value of the property for that tax year. In the next tax year in which the property is appraised, the chief appraiser may not increase the appraised value of the property unless the increase by the chief appraiser is reasonably supported by clear and convincing evidence when all of the reliable and probative evidence in the record is considered as a whole. If the appraised value is finally determined in a protest under Section 41.41(a)(2) or an appeal under Section 42.26, the chief appraiser may satisfy the requirement to reasonably support by clear and convincing evidence an increase in the appraised value of the property in the next tax year in which the property is appraised by presenting evidence showing that the inequality in the appraisal of property has been corrected with regard to the properties that were considered in determining the value of the subject property. The burden of proof is on the chief appraiser to support an increase in the appraised value of property under the circumstances described by this subsection.

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

Appraisal Performance Tests and Performance Measures Attained

Section 5.102, Tax Code requires the Comptroller of Public Accounts to review county appraisal district governance, taxpayer assistance, operating and appraisal standards, procedures and methodology at least once every two years. School districts located in counties that do not receive the Methods and Assistance Program (MAP) reviews in a year will be subject to property value studies in that year. A MAP review was completed for 2024 and the district received a perfect score of 100, which exceeds the mandatory standard of evaluation established by the Texas Comptroller. The next MAP Report will be conducted in 2026. To review the Texas Comptroller's 2024 MAP Report for HCAD, use the following link:

https://comptroller.texas.gov/taxes/property-tax/map/2024/harris-2024.pdf

Government Code Section 403.302 requires the Comptroller to conduct a study at least once every two years to determine the degree of uniformity and the median level of appraisals by the appraisal district with each major category of property, as required by Section 5.10, Tax Code. If the locally appraised value in a school district is within the statistical margin of error of the state value, the Comptroller's Property Tax Assistance Division (PTAD) certifies a school district's local tax roll value to the Commissioner of Education. A 5% margin of error is used to establish the upper and lower value limit for each school district. If the local value is outside the acceptable range, the PTAD certifies the state value, unless the school district is eligible for a grace period, which is a period when local value is used even though it is determined to be invalid. A property value study was conducted in 2023 and the restults were received in January of 2024. To review the Texas Comptroller's 2024 PVS Report for HCAD, use the following link:

https://comptroller.texas.gov/auto-data/PT2/PVS/2024P/101index.php

Certification Statement

I, Roland Altinger, Chief Appraiser for Harris Central Appraisal District, certify that, to the best of my knowledge and belief:

- the statements of fact contained in this report are true and correct.
- the reported analyses, opinions, and conclusions are limited only by the reported assumptions and limiting conditions, and are my personal, impartial, and unbiased professional analyses, opinions, and conclusions.
- I have no present or prospective interest in the property that is the subject of this report, and I have no personal interest with respect to the parties involved.
- I have performed services in my capacity as Chief Appraiser regarding the property that is the subject of this report within the three-year period immediately preceding acceptance of this assignment.
- I have no bias with respect to any property that is the subject of this report or to the parties involved with this assignment.

— my engagement in this assignment was not contingent upon developing or reporting predetermined results.
— my compensation for completing this assignment is not contingent upon the reporting of a predetermined value or direction in value that favors the cause of the client, the amount of the value opinion, the attainment of a stipulated result, or the occurrence of a subsequent event directly related to the intended use of this appraisal.
— my analyses, opinions, and conclusions were developed, and this report has been prepared in conformity with the Uniform Standards of Professional Appraisal Practice.
— I have not made a personal inspection of the properties that are the subject of this report.
— The following individuals provided significant mass appraisal assistance to me in preparing this report:

NAME	TITLE	TDLR #	TYPE of ASSISTANCE
Roland Altinger	Chief Appraiser	66214	Oversight of Information & Assistance, ARB Operations, Jurisdiction Communications divisions; Information Systems and Administration departments
Jason Cunningham	Deputy Chief Appraiser	68135	Direct appraisal divisions' activities
Adam Bogard	Deputy Chief Appraiser	71162	Direct appeal divisions' activities
Clarette Carter-Walker	Deputy Chief Appraiser	73825	Direct compliance divisions' activities
April Holcomb	Associate Chief Appraiser, Appraisal Operations	70887	Direct appraisal operations activities
Kyle Whitener	Project Analyst IV	72583	Provide problem resolution, training and data analysis
Chet Wood	Project Analyst III	73002	Provide problem resolution, training and data analysis
Liz Hernandez	Project Analyst II	72679	Provide statistical data analysis and training
Ryan Albe	Project Analyst I	73710	Provide problem resolution, training and data analysis
Shani Miller	Project Analyst I	76660	Provide problem resolution, training and data analysis

Byron Stanley	Associate Chief Appraiser	71494	Plans and directs residential field and valuation activities
Benita Harvey	Manager Sr.	71782	Manages the account resolution group
Khari Small	Manager Sr.	71665	Manages residential field group
Sherri Potts	Manager Sr.	68566	Manages residential valuation group and activities
Alycia Bryant	Manager	74139	Assists with managing the residential field group
Ayana Johnson	Manager	71166	Supervises the split-outs and combinations section
Chauncey Majors	Manager	73000	Supervises residential valuation group
Cynthia Burns	Manager	70919	Assists with managing the residential field group
Ed Wolff	Manager	70753	Supervises residential valuation group
Edgar Robles	Manager	71055	Supervises correction and mobile home section
Patrick Brogan	Manager	69419	Supervises residential valuation group
Chet Nimitz	Supervisor Sr.	72999	Supervises residential data collection for Zone 6
Frank Altamuro	Supervisor Sr.	72493	Supervises residential data collection for Zone 8
Chiquitha Watson	Supervisor	75938	Supervises residential data collection for Zone 3

David Vatuna	Supervisor	76170	Supervises residential data collection for Zone 7.1
Herman Breaux	Supervisor	74140	Supervises residential data collection for Zone 9.2
Ka Chan	Supervisor	73837	Supervises residential data collection for Zone 7.2
Mark Case	Supervisor	75787	Supervises residential data collection for Zone 10
Mark Davis	Supervisor	75151	Supervises residential data collection for Zone 9.1
Michael Gipson	Supervisor	74142	Supervises residential data collection for Zone 5
Philisia Washington	Supervisor	75146	Supervises residential data collection for Zone 4
Raven Portis	Supervisor	72578	Supervises residential data collection for Zone 2
Tambra Lilly	Supervisor	73122	Supervises residential data collection for Zone 1
Shelly Meinkowsky	Valuation Analyst V	69684	Residential valuation activities in ISD 25, HISD 1F River Oaks
James Aprea	Valuation Analyst IV	71167	Residential valuation activities in HISD 1B North, ISD 31
Jamie Stanley	Valuation Analyst IV	71903	Residential valuation activities in HISD 1F inside loop
Joseph Carr	Valuation Analyst IV	73952	Residential valuation activities in HISD 1B south & 1J
Melissa Soto	Valuation Analyst IV	69310	Residential valuation activities in HISD 1A, 1F (outside)
Alex Ton	Valuation Analyst III	72818	Residential valuation activities in ISD 04

Danielle Torres	Valuation Analyst III	74802	Residential valuation activities in ISD 02, 20,27,29
Khoa Le	Valuation Analyst III	72489	Residential valuation activities in HISD 1C, 1D
Rhanjisha Bhat	Valuation Analyst III	75089	Residential Valuation Activities in ISD 24, 26
Anthony Le	Valuation Analyst II	76606	Residential valuation activities in ISD 05, 16, 23
Brandon Curless	Valuation Analyst II	74307	Residential valuation activities in ISD 06, 15, 21
Christopher Li	Valuation Analyst II	75271	Residential valuation activities in ISD 09, HISD 1E
Cynthia Vasquez	Valuation Analyst II	75450	Residential valuation activities in HISD 1H
Hwee Tay	Valuation Analyst II	75925	Residential valuation activities in ISD 19
Jamail Allen	Valuation Analyst II	76791	Sales Research
Ryan Timlin	Valuation Analyst II	75601	Residential valuation activities in ISD 17
Sarah Hatch	Valuation Analyst II	74823	Residential valuation activities in ISD 07, 18, 28, 30
Tramy Nguyen	Valuation Analyst II	75269	Residential valuation activities in ISD 03, 08
Erika Nettles	Associate Chief Appraiser	68795	Manages the commercial division. Maintains and updates income models and final valuation
Danielle Matthews	Manager Sr	74150	Manages commercial property valuation

Mike Mateja	Manager Sr	70090	Manages commercial property field operations
Ramon Smith	Manager	75211	Manages commercial valuation of office & apartments
Melissa Brodie	Manager	70640	Manages agricultural valuation
Ramon Smith	Manager	75211	Manages commercial valuation of office & apartments
Robert Carter	Manager	68756	Supervises commercial field appraisal staff
Tracy Lensey	Manager	69255	Manages commercial valuation of vacant land
Vacant	Manager		Manages commercial valuation of retail properties, hotels, motels, malls, golf courses & warehouses
Chau Tran	Supervisor	75118	Supervises commercial field appraisal staff
Dennis Simshaeuser	Supervisor	75607	Supervises commercial field appraisal staff
Kelvin Lopez	Supervisor	76302	Supervises commercial field appraisal staff
Gene Kotlyar	Project Analyst III	68628	Provides technical support for commercial valuation & analysis
Alvin Brown	Valuation Analyst V	68377	Commercial valuation of vacant land
Clayton Rogers	Valuation Analyst V	71491	Commercial valuation of warehouses
Vacant	Valuation Analyst V		Commercial valuation of office buildings

Antonio Pacheco	Valuation Analyst IV	68794	Commercial valuation of retail
James Leach	Valuation Analyst IV	71034	Commercial valuation of warehouses
Juana Jackson	Valuation Analyst IV	70514	Commercial valuation of apartments
Linton Green	Valuation Analyst IV	71780	Commercial valuation of vacant land
Loretta Faison	Valuation Analyst IV	72809	Commercial valuation of apartments
Ola Balogun	Valuation Analyst IV	71789	Commercial valuation of warehouses
Peter Vu	Valuation Analyst IV	75270	Commercial valuation of retail
Roman Cherwonogrodzky	Valuation Analyst IV	73190	Commercial valuation of apartments
Adriana Palencia	Valuation Analyst III	74599	Commercial valuation of office buildings
Aaron Pack	Valuation Analyst III	72492	Commercial valuation of vacant land
Khekie Chanthanark	Valuation Analyst III	71227	Commercial valuation of medical related properties
Mathew Ford	Valuation Analyst III	75276	Commercial valuation of retail
Thomas Bratcher	Valuation Analyst III	71958	Commercial valuation of vacant land
An Ong	Valuation Analyst II	72307	Commercial valuation of office buildings

Jackson Randle	Valuation Analyst II	76461	Commercial valuation of vacant land
Joshua Beasley	Valuation Analyst II	76516	Commercial valuation of warehouses
Lincoln Ibrahim	Valuation Analyst II	76063	Commercial valuation of vacant land
Mayra Palacios	Valuation Analyst II	75930	Commercial valuation of retail
Nicholas Spedale	Valuation Analyst II	76211	Commercial valuation of apartments
Patricia Craft	Valuation Analyst II	74491	Commercial valuation of vacant land
Timothy Clark	Valuation Analyst II	75907	Commercial valuation of vacant land
Christopher Shackleford	Appraiser IV	73951	Verifies, maintains and conducts hearings on agricultural valuation
Rafael Torres	Appraiser IV	74607	Verifies, maintains and conducts hearings on agricultural valuation
Zachary Taylor	Appraiser IV	74182	Verifies, maintains and conducts hearings on agricultural valuation
Hal Long	Associate Chief Appraiser	67823	Managing and coordinating appraisals in the Business and Industrial Property Division (BIPD)
Sherene Blake	Sr. Manager, Field	69898	Senior Manager of the Field Section
Loren Williams	Sr. Manager, Valuation	73716	Senior Manager of the Valuation Section
Barbara O’Neal	Manager, Valuation	69897	Manager of the Valuation Section

Eric Young	Manager, Valuation	74467	Manager of the Valuation Section
Laurie Gillespie	Manager, Valuation	72182	Manager of the Valuation Section
Osaretin Osague	Manager, Valuation	74500	Manager of the Valuation Section
Tonya Nguyen	Manager, Valuation	72685	Manager of the Valuation Section
Kierra David	Supervisor, Field	75171	Supervisor of the Field Section
Robbie Moore	Supervisor, Field	72815	Supervisor of the Field Section
Bryce Tewell	Project Analyst III	72819	Research and development in the Business and Industrial Property Division (BIPD)
Suzanne Shell	Valuation Analyst V	72816	Appraises industrial and personal property
Hollie Dunlap	Valuation Analyst IV	72808	Appraises industrial and personal property
Jerardo Jimenez	Valuation Analyst IV	69635	Appraises industrial and personal property
Kenyetta Blocker	Valuation Analyst IV	71838	Appraises industrial and personal property
Manuel Teniente	Valuation Analyst IV	74905	Appraises industrial and personal property
Phebbie Nguyen	Valuation Analyst IV	73044	Appraises industrial and personal property
Tiffany McKentie	Valuation Analyst IV	72408	Appraises industrial and personal property

Jarvis Thibodeaux II	Valuation Analyst III	75696	Appraises industrial and personal property
Johnny Pham	Valuation Analyst III	75776	Appraises industrial and personal property
Long Nguyen	Valuation Analyst III	75559	Appraises industrial and personal property
Marycela Hernandez	Valuation Analyst III	73202	Appraises industrial and personal property
Paige Lawrence	Valuation Analyst III	76079	Appraises industrial and personal property
Beena Chacko	Valuation Analyst II	75869	Appraises industrial and personal property
Brittany Douglas	Valuation Analyst II	73948	Appraises industrial and personal property
Carla Smith	Valuation Analyst II	75770	Appraises industrial and personal property
Lauren Tulsa	Valuation Analyst II	73502	Appraises industrial and personal property
Matthew Reyes	Valuation Analyst II	70248	Appraises industrial and personal property
Roriser Meeks	Valuation Analyst II	72084	Appraises industrial and personal property
Beatrice Gilford	Valuation Analyst I	75786	Appraises industrial and personal property
Darrell Brown	Valuation Analyst I	74196	Appraises industrial and personal property
Javaughn Smalling	Valuation Analyst I	77090	Appraises industrial and personal property

Karen Trang	Valuation Analyst I	73303	Appraises industrial and personal property
Mandy Nolan	Valuation Analyst I	76072	Appraises industrial and personal property
Minh Le	Valuation Analyst I	76136	Appraises industrial and personal property
Nicole Lavigne	Valuation Analyst I	76068	Appraises industrial and personal property
Sandi Sterling	Valuation Analyst I	76168	Appraises industrial and personal property
Sedniqa Griffin	Valuation Analyst I	75926	Appraises industrial and personal property
Spiro Zoula	Valuation Analyst I	74713	Appraises industrial and personal property
Tan Nguyen	Valuation Analyst I	75608	Appraises industrial and personal property
Tatiana Coleman	Valuation Analyst I	76165	Appraises industrial and personal property
Viettu Deem	Valuation Analyst I	74699	Appraises industrial and personal property
Shannon Stary	Pritchard & Abbott, President, and CEO	68599	Appraises minerals, industrial, utility, and personal property
Jason S. Driskell	Pritchard & Abbott, Houston District Mgr.	70598	Appraises minerals, industrial, utility, and personal property
Christopher Palermo	Pritchard & Abbott, Asst. District Mgr.	71361	Appraises industrial, utility, and personal
Andrew Mize	Pritchard & Abbott, Appraiser	72992	Appraises industrial, utility, and personal

Bennett Massie	Pritchard & Abbott, Appraiser	77223	Appraises industrial, utility, and personal
Gabriel Beaufeaux	Pritchard & Abbott, Appraiser	77802	Appraises industrial, utility, and personal
Jessica Treille	Pritchard & Abbott, Appraiser	74017	Appraises industrial, utility, and personal
Joel Fischer	Pritchard & Abbott, Appraiser	72810	Appraises industrial, utility, and personal
Karen Khan	Pritchard & Abbott, Appraiser	76280	Appraises industrial, utility, and personal
Michelle SiFuentes	Pritchard & Abbott, Appraiser	76956	Appraises industrial, utility, and personal
Rodney Kret	Pritchard & Abbott, Appraiser	63468	Appraises minerals, industrial, utility, and personal property
Sandra Villarreal	Pritchard & Abbott, Appraiser	71839	Appraises minerals
Shannon Evans	Pritchard & Abbott, Appraiser	74490	Appraises industrial, utility, and personal
Toni Cuellar	Pritchard & Abbott, Appraiser	75914	Appraises minerals
Tony Belinoski	Pritchard & Abbott, Appraiser	70386	Appraises industrial, utility, and personal
Wesley Gilbert	Pritchard & Abbott, Appraiser	72486	Appraises industrial, utility, and personal
Jon Neely	Capitol Appraisal, CEO	16216	Appraises all property types
Gregg Davis	Capitol Appraisal, President	71552	Appraises utility properties

Dave Popelar	Capitol Appraisal, Appraiser	71614	Appraises refineries & chemical plants
Noel Wilcoxson	Capitol Appraisal, Appraiser	71581	Appraises refineries, chemical plants, olefins, and co-generation
Hugh L. Landrum, Jr.	Landrum & Associates, President	67041	Appraises chemical plants & personal property
Tracey Foster	Landrum & Associates, Vice President/General Counsel	68689	Appraises mineral properties
Andrew Saul	Landrum & Associates, Appraiser	77099	Appraises industrial plants & personal property
Doug Warren	Landrum & Associates, Appraiser	66961	Appraises industrial plants & personal property
Michael Jolivet	Landrum & Associates, Appraiser	78072	Appraises industrial and personal property
Rachel J. Dowden	Landrum & Associates, Appraiser	75464	Appraises industrial and personal property

Roland Altinger, CAE, RPA, CTA

Chief Appraiser

Report by Appraisal Divisions

The district allocated the work of the mass appraisal among several divisions, who report to the Deputy Chief Appraiser - Appraisal & Security. The appraisal divisions consist of the Residential Property Division (RPD), the Commercial Property Division (CPD), and the Business/Industrial Property Division (BIPD). BIPD encompasses business and complex industrial properties, some of which are appraised through mass appraisal models, others of which are directly appraised. Additionally, the division's management coordinates the work of the district's appraisal contractors. Each division allocates appraisal staff that is responsible for maintaining property characteristic data and discovering and listing new construction annually and, valuation analysts whose responsibility it is to develop, calibrate, and apply the various mass appraisal models for their respective property types.

Residential Property Division

Scope of Work

RPD is responsible for collecting and maintaining property characteristic data for all residential property, and developing equal and uniform market values for each parcel. There are more than 1,274,600 residential improved parcels (inclusive of more than 31,000 personal property mobile homes) and more than 110,000 vacant residential parcels within the appraisal district's jurisdiction.

Field data collection requires organization, planning and supervision of the field staff. Residential appraisers are assigned throughout Harris County to conduct field inspections and record information via a laptop device. Data items required to accurately describe and value property are keyed at the time of inspection.

Production standards are set and upheld for the various field activities. It is the supervising appraisers' responsibility to ensure that not only are production standards met, but that the quality of data is reliable. Since data is keyed live to the system, supervisors have the capability to check on appraisers' productivity at any time during the day.

New appraisers are trained in the specifics of data collection set forth in the listing manual and receive hands-on training in the field. Experienced appraisers are routinely retrained in listing procedures prior to each major project, such as new construction or field/office reinspection. The county is segmented into geographic zones for work allocation. A supervising appraiser is designated to a zone, and it is his/her responsibility to coordinate work assignments among the appraisers and provide quality assurance through field and office review of each appraiser's work. During various projects we combine rally points for two zones, thus insuring that at least one supervisor can meet with the group on a daily basis.

The appraisers collect data at each property and key changes directly to their laptop. They update characteristics such as land influences and topography, and improvement data, such as square foot of living area, year built, quality of construction, and condition. The division uses training manuals that establish uniform procedures for listing real property. All properties are coded according to these manuals and the approaches to value are structured and calibrated based on this coding system. The field appraisers use these manuals during their initial training and during field inspections. Manufactured housing is listed as real property if a Statement of Ownership and Location is filed at the county in which the property is located, otherwise, the property receives a state classification of M3 and is listed as personal property.

Projects

New Construction

The field inspection of new construction permits and work file accounts began in November 2024 and was substantially completed by the end of April 2025. 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.

Once the new construction work is completed in the field, an appraiser conducts an office review of each property to ensure the value of the property is consistent with the characteristics of the property. Almost 64,123 permitted or work file items were inspected for 2025. Included in this number are approximately 16,000 new home starts added to the tax roll for 2025.

Fieldwork was generated via electronic workflow by geographic area and neighborhood. With the continued use of laptops, work is grouped and assigned electronically by the supervisor. Accounts are worked by an appraiser and routed to their supervisor upon completion. The supervisor then quality checks the accounts and pushes it on to be value reviewed in the office.

Sales Verification

Appraisers and valuation analysts conduct both office and field inspections on properties with recent sales activity to verify the property characteristics, and when able, validated the sales information with the property owner. We verified data on more than 24,100 sold properties during this project.

Reinspection

Both field and office reinspection was conducted for tax year 2025. Office reinspection was conducted by the district's appraisers and contract appraisers. Field reinspection was conducted by the district's appraisers. Appraisers are responsible for verifying the characteristics of each property visited. When changes are identified, they are keyed to the 2025 database. The confirmation of sales data and verification of characteristics of sold properties were incorporated with any accounts selected for field inspection. During office reinspection, properties are inspected using current aerial photos provided by our software vendor. Appraisers are able to verify external characteristics, measure walls, and identify economic influences. If the improvements are not visible due to tree cover, or changes in the property are too substantial to fix from the office, a field inspection is performed.

Our goal is to comply with generally recognized guidelines that recommend reinspection of property every four to six years. For tax year 2025, we inspected almost 274,100 properties.

Split-out and Combination of Accounts

At a property owner's request, the district is required to split-out 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. For the 2024 tax year 16,212 accounts were processed with 200 accounts still pending. As of the date of this report, we have completed over 10,022 accounts for tax year 2025 with 4,500 still pending. In many instances, the property owner's request involves not only current year, but also prior year corrections, which increases the workload.

Jurisdiction Estimates of Value

Each year the RPD makes value estimations for taxing jurisdictions on newly developed areas. The purpose of the estimates is to give a total value for all parcels in question so that the taxing jurisdictions can estimate their total tax base as of a specified date. During 2024, we completed 176 estimates of value. As of the date of this report we have completed 39 for 2024 and have received 39. The research coordinator takes an average of more than six hours to complete the field and office work associated with each estimate of value.

New Subdivisions

New subdivisions are reviewed and valued based on information gathered in the field and office. Analysts set up base lot sizes, rates for land and estimate the typical grade and characteristics for improvements. Appraisal staff drives the area of the new subdivision, lists the property characteristics and identifies the status of the property as of January 1. For tax year 2024, we processed 1,170 new subdivisions. To date, we have received 846 new subdivisions of an antcipated 1,100 for 2025.

Sources of Data

The sources of data collection and verification include, but are not limited to, building permits, data mailers, informal meetings and formal hearings, information collected in the field, newspapers, publications, and property owner correspondence by letter and via the internet. Oblique imagery, which allows the appraiser to view a property from multiple angles, is also frequently used for data verification. The appraiser can verify exterior measurements with this software if the tree cover is not too thick. Street-level images are also attached to each account and can assist in the verification of data.

Building permit data attained from the county, City of Houston and surrounding cities, triggers field inspections on property experiencing significant characteristic changes due to new construction or remodeling. Property owners contact our web site to report data inaccuracies that initiate a field inspection or office correction of the data. The use of the internet has enabled us to download mobile home information and upload the data directly to a file in our computer system, which generates a questionnaire that is mailed to the property owner.

Data Maintenance

The residential property support section is responsible for sorting, researching and keying accounts to our permit system, processing new subdivisions, researching and keying mobile home information, and scanning, filing, boxing and warehousing information. This section was also able to provide support to other divisions in need.

Highest and Best Use Analysis

The highest and best use of residential property is normally its existing use. This is due in part to the fact that residential communities through use of deed restrictions, and in some areas zoning, precludes other land uses. The division undertakes the analysis of highest and best use in transition areas and areas of mixed residential and commercial use. In transition areas with ongoing gentrification, the analyst 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. For example, it may be determined in a transition area that older, non-remodeled homes are economically obsolete, which we refer to as “mis-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 analyst reviews properties 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.

The exception to this process is residential homestead property. Section 23.01(d), Tax Code provides that a residence homestead's market value for ad valorem tax purposes is determined solely on the basis of the property's value as a residence homestead, regardless of highest and best use. In mixed-use areas, residential homesteads are valued differently than non-homestead residential property. We use a separate land use code for these properties, which allows us to value the homestead properties separately. Each year we review the status of the exemptions in the mixed-use neighborhoods and change the land use code accordingly. Typical residential neighborhoods are not affected by this tax code because market value estimates are determined based on the residential uses and are not generally affected by the value of other property types.

Model Specification

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 rates trends, availability of vacant land, and construction trends and costs are collected from private vendors and public sources. Information is gleaned from real estate publications and sources such as the Houston Business Journal, the Subdivision and Lot Price Survey by CDS Research, the Houston Metrostudy, UH Center for Public Policy and The Real Estate Center of Texas A&M. Continuing education courses, conference seminars from TAAD and International Association of Assessing Officers (IAAO), real estate seminars from the Urban Land Institute, and UH real estate symposiums, provide the valuation analysts a current economic outlook on Houston's real estate market.

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. 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 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 and condition of dwellings, square footage of living area, and story height. Delineation will be reflected in GIS maps for each neighborhood and it also involves 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. There are approximately 6,800 residential valuation neighborhoods. Neighborhoods are reviewed in the field and delineated based on observable aspects of homogeneity. Neighborhood boundaries are periodically reviewed to determine if further neighborhood delineation is warranted or, if existing neighborhoods could now be combined because of similar markets. The combined neighborhoods provided a larger sales base for analysis. 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 later in the report, is performed on a neighborhood basis, and in soft sale areas on a neighborhood group basis.

Market Areas/Time Adjustments

In addition to neighborhood analysis, market areas were analyzed to determine whether time of sale was a factor in establishing market value as of January 1, 2025. Market areas are clusters of neighborhoods with geographic similarities that exhibit parallel market conditions and trends. For 2025, we have 83 residential market areas in Harris County, 22 of which have time adjustments. The adjustment of sales for time is an important component of mass appraisal valuation and ratio studies. The district conducts these studies using guidelines set forth in the International Association of Assessing Officers' (IAAO) Standard on Ratio Studies and in compliance with the Uniform Standards of Professional Appraisal Practice. In our development of time adjustments, we applied the sales ratio trend analysis method using an industry recognized statistical software package. The sales ratio trend analysis method of deriving time-adjustment factors from market data is the most efficient method, not requiring the analysis of paired sales and related adjustments for differences in physical characteristics.

Trends in the residential market are represented by changes in sales prices over time. However, an analysis that simply tracks changes in sales prices can be misleading. Changes in median or average sales prices may not always indicate market value trends. Those changes may rather be reflective of the particular mix of sold properties. For example, the properties sold in one month may have high numbers of low-end homes. The sales next month may contain a greater number of high-end homes. The difference in the median or average sales prices can be great but may not reflect a true trend in the market.

Changes in sales ratios over time better serve to indicate sales price trends. The sales ratio is the ratio of an appraised value to the sales price of a property. The benefit of sales ratios is that the appraised values reflect a common point in time that allows the effects of changing sales prices to be measured.

Residential time adjustments are analyzed and applied by market area. The district's basic steps for analyzing time adjustments are: collect sales data, screen sales, trim extreme outlier sales ratios and run

statistical analysis. We analyze 12 months of sales which allows for a simple linear regression of sales price-appraisal ratios.

The district's statistical analysis checks that the ratios have a normal distribution and that the time-adjustment results meet statistical tests of significance. A lack of a time adjustment may not mean that market values are unchanged but that those changes may not be statistically significant or consistent over the time period.

For market areas that meet our statistical tests a monthly time-adjustment rate is calculated and applied to sales prices. The monthly time-adjustment rate is non-compounding and the sales adjustment is calculated as:

$$S \times (1 + (r \times t))$$

Where:

$S =$ sales price

$r =$ monthly time-adjustment rate

$t =$ number of months from date of sale to appraisal date.

The time-adjusted sales prices are then used in our sales ratio analysis to produce January 1 values. Per Section 23.01 of the Tax Code the district is required to consider foreclosure sales in determining market value. Foreclosures are considered in determining neighborhood values but for the purposes of calculating time trends they are excluded.

Model Calibration

Cost Schedules

All residential parcels in the district are valued from cost schedules using a comparative unit method. The district's residential cost schedules mimic that of Marshall & Swift (M&S), a nationally recognized cost estimator, but are customized to fit Harris County's local residential building and labor market.

To ensure that our cost program remains current for tax year 2025, a comparison was made between the 3rd Quarter 2023 and the 3rd Quarter 2024 M&S replacement costs for a sample of improved residential properties. The year-over-year difference indicated a less than a 1.15% change in costs. This change left HCAD's residential cost within the acceptable limits described in Section 23.011(4) of the Texas Property Tax Code. Therefore, the residential base rate will remain unchanged at $89.00/sf for the 2025 tax year.

Depreciation Analysis

The residential depreciation analysis for 2025 was conducted in September of 2024 following the steps outlined in the IAAO's ***Property Appraisal and Assessment Administration***. Sales were reviewed from the CAMA system for the period of February 2024 through January 2025. The results are filtered to return only qualified single family residential sales with no remodel.

IAAO recommends: “If effective ages are not available, use actual ages and exclude improvements in very good or poor condition relative to actual age.” Property Appraisal and Assessment Administration IAAO, 1990, p.358. For this reason, only accounts with good, average and fair CDU’s are selected for analysis while the upper end and low end are filtered out.

Two additional filters are applied to the sales sample. Accounts outside of three standard deviations of the median appraisal/sale ratio are removed to ensure a normal statistical distribution and to avoid extreme outliers. Additionally, accounts with a land/sale ratio greater than .90 are removed to avoid using sales near or at land value. The final sample used for analysis includes over 31,500 sales.

For each sale, the residual building value (RBV) is subtracted from the replacement cost new (RCN), then divided by the RCN for a calculation of market-derived depreciation, or

$$\%\, Depreciation \;=\; (RCN - RBV) \,/\, RCN$$

Percent good is calculated by taking the sales price (S) minus the total of the land value (LV) and other features value (OV) divided by the RCN, or

$$\%\, Good \;=\; [S - (LV \;+\; OV)] \,/\, RCN$$

The resulting percent good for each sale is plotted against the building’s actual age using IBM’s SPSS 27 statistical software package and a curve was fit to the data. Several curve estimation models are tested with the quadratic model being chosen as the best fit. The curve results are compared to the current depreciation schedule for average CDU. The 2025 analysis shows slight variations from the current schedule but not significant enough to warrant any change. The depreciation schedules for 2024 are unchanged.

Sales Information

Residential improved and vacant sales are collected from a variety of sources; including district questionnaires sent to the grantee, and the grantor when available, field discovery, protest hearings, various vendors, builders, and realtors. A sales coding system is maintained to define salient facts related to a property’s purchase or transfer.

In accordance with Government Code Sec. 552.149, the appraisal district must keep confidential any information about properties that an appraisal district obtains from private sources. We cannot publicly disclose (or display on our website) property sales information we obtain from private sources. Sales information is not available for public inspection in the Information & Assistance division or on the HCAD website.

Sales that we used or considered in arriving at a particular value are available to property owners who timely file a value protest, and are included as part of the iFile evidence material. This law in no way prohibits the district's use of confidential sales in the valuation process. A property owner or agent who receives confidential sales information from HCAD in conjunction with the protest evidence is required by Sec. 552.149 of the Government Code to hold that information in confidence. Failure to do so is a criminal violation of the Texas Public Information Act.

Land Analysis

The analysts conduct residential land analysis each year for their respective valuation zones. The analysts develop a base lot, primary rate, and assign each unique neighborhood to one of six 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. Land information required to consistently value individual parcels within neighborhoods is stored in a computerized land table. 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 preferred method for appraising land is the sales comparison approach. If a sufficient number of sales are not available, the analysts use abstraction or allocation methods to ensure that the land values best reflect the contributory market value of the land to the overall property value.

Statistical Analysis

The division performs statistical analysis annually to evaluate whether values are equitable and consistent with the market. Ratio studies are conducted on each of the approximately 6,800 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 a school district 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 analysts a tool by which to determine both the level and uniformity of appraised value on a stratified neighborhood basis. Review of the standard deviation, coefficient of variation, and coefficient of dispersion can discern appraisal uniformity within and between stratified neighborhoods. Our computer-assisted mass appraisal (CAMA) system provides the analyst with an analysis tool that can run statistics and output results.

The analyst, through the sales ratio analysis process, reviews every neighborhood annually. The first phase involves neighborhood ratio studies that compare the recent sales prices of neighborhood properties to the previous year's certified values. The ratio study affords the analyst an excellent means of judging the present level of appraised value and uniformity of the sales. The analyst, 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.

At the time of this report, more than 624,000 residential properties had their market values increased from the prior year, 354,000 residential properties had their market values decreased, and 136,000 residential properties remained unchanged.

Final Models: Market Adjustment and Time Consideration

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 market trended cost approach. This type of approach accounts for neighborhood market influences not specified in the cost model.

The following equation denotes the model used:

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

The market value (MV) equals the market adjustment factor (MA) multiplied by the replacement cost new (RCN) less depreciation (D), plus the land value (LV). 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 location variances between market areas or across a jurisdiction.

If a neighborhood is to be updated, the analyst runs a ratio study that compares recent time adjusted sale prices in a neighborhood with the properties' current cost values trended by the previous year's market adjustment factor. The weighted mean of these ratios indicates the neighborhood's level of value. This weighted mean ratio is compared to the target appraisal-to-sale ratio to determine a new market adjustment factor that will trend the values closer to the market value evidenced by recent sale prices. The sales used reflect the market influences and conditions only for the specified neighborhood, thus producing more representative and supportable values. A market adjustment factor is calculated and applied uniformly by state class to residential properties within a neighborhood. Once the market-trend factors are applied, a second run of the ratio study is generated that compares recent sale prices with the proposed market values for these sold properties. From this set of ratio studies, the analyst judges the appraisal level and uniformity in both update and non-update neighborhoods.

How Estimates Are Reviewed

Office Review

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 difference are noted for each property within a delineated neighborhood allowing the analyst to identify, research, and resolve value anomalies before final appraised values are released.

Once the analyst is satisfied with the level and uniformity of value for each neighborhood within his or her area of responsibility, queries are run based on predetermined tolerances to identify accounts that have increased or decreased by a certain percent or dollar amount. Parcels that fail the tolerances are programmatically kept from noticing until the analyst or appraiser can resolve the problem.

Once the proposed value estimates are finalized, the analyst 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 Deputy Chief Appraiser for final review and approval. The primary objective of this review is to ensure that the proposed values have met acceptable tolerance ranges based on the individual neighborhood's profile.

Appraisal Performance

Sales Ratio Study

The primary analytical tool used by the analysts to measure and improve performance is the ratio study. The division ensures that the appraised values that it produces meet the standards of accuracy in several

ways. Overall sales ratios are generated for each school district by quarter to allow the analyst to review general market trends within their area of responsibility and, to provide an indication of market appreciation over a specified period of time. Several sets of neighborhood sales ratios on each of the approximately 6,800 delineated residential neighborhoods are produced prior to the setting of preliminary values and after finalization of appraised values. The neighborhood descriptive statistics are reviewed for each neighborhood being updated for the current tax year.

Texas does not have mandatory sales disclosure; therefore, the district does not have access to all property transactions, which limits sales analysis to only those sales acquired by the district through a commercial vendor or submitted voluntarily by the property owner. Available sales are screened to ensure, to the extent possible, that only valid indicators of market value are included. Sales identified as invalid transactions due to atypical financing, sales between relatives, corporate affiliates and estate sales, and sales with partially complete new construction are excluded from the ratio study. It is common to expect residential foreclosure sales in any given real estate market. Harris County experienced a significant decline in the number of foreclosure sales ever since 2014. Foreclosures are field inspected each year to ensure the accuracy of their listing, are analyzed for the purpose of valuation and included in the ratio study.

Commercial Property Division

Scope of Work

The scope of this mass appraisal includes all of the commercial real property located within the boundaries of the Harris County taxing jurisdiction that falls under the responsibility of the CPD. All three approaches to value are considered in estimating market value for each property, the most applicable of which is given primary emphasis.

The cost approach to value is applied to all real property. This methodology involves using national cost data reporting services as well as actual cost information on comparable properties whenever possible. Cost models are developed based on the Marshall & Swift cost information, and are modified based on local factors. This approach also employs alternate valuation procedures to value the underlying land value.

The income approach to value was applied to those real properties that are typically viewed by market participants as “income producing” and for which the income methodology is considered a leading value indicator.

The sales comparison (market) approach was used for estimating land value and in comparing sales of similarly improved properties to each parcel on the appraisal roll. Other recognized appraisal methods and techniques are used in the valuation of properties where sales information is not available or is insufficient to produce credible results.

The division appraises 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, 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 pro-rata interests.

The function of this mass appraisal is to provide an equitable and efficient market valuation of all property in this appraisal district for ad valorem tax purposes in accordance with law.

Procedure for Collecting and Validating Data

The property characteristic data of every property subject to taxation by a jurisdiction within HCAD’s area of responsibility is incorporated into a CAMA system. The commercial appraisers perform maintenance of this inventory of special purpose properties. Building permits trigger field inspections, which capture any alterations to the properties for the pertinent tax year. Appraisers conduct field inspections and collect or update property characteristics via field laptops. For 2025, field appraisers visited over 11,000 accounts. This information serves as the basis for the valuation of property. Also, if any discrepancies are discovered during the hearings process or at any other time, field personnel are sent for a field check prior to the next tax season, and in some cases, during the current tax season.

A project was started in 2010 and continued through 2024 to digitize existing building sketches. This project will enhance the valuation process for both cost and income properties by allowing for perimeter adjustments along with identification of building sections by use.

The quality of data used is of paramount importance to accurate valuation 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 retrained in listing procedures prior to major field projects such as new construction, sales validation, or data review.

The primary manual pertinent to data collection and documentation is the *Commercial Lister's Manual*. This manual is continually updated, providing a uniform system of itemizing the components comprising improved properties. All properties located in HCAD's inventory are coded according to this manual and the approaches to value are structured and calibrated based on this coding system. The most recent revision of the listing manual is 2025.

Sources of Data

A vendor provides the district a copy of the deeds recorded in Harris County that convey commercially classed properties. 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 questionnaire, which is mailed to both parties in the transaction (grantor and grantee). If a questionnaire is not returned within thirty days, a second questionnaire is mailed. If a questionnaire is answered and returned, the documented responses are recorded in the sales database system. If no information is provided, verification is then attempted via phone calls to both parties. If the sales information is still not obtained, other sources are contacted such as the brokers involved in the sale, property managers or commercial vendors. In other instances, sales verification is obtained from local appraisers. Finally, closing statements are often provided during the hearings process. The actual closing statement is the most reliable and preferred method of sales verification. After the sales data has been keyed into the database, the data is reviewed to maintain quality control. Additionally, a nationally recognized vendor of market data provides online access to commercial sales information. Other sources of sales data include fee appraisals acquired through the hearings process and local, regional, and national real estate and financial publications.

The data used for commercial valuation 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 CPD includes actual income and expense data (typically obtained through the hearings process), actual contract rental data, leasing information (commissions, tenant finish, length of terms, etc.), and actual construction cost data. In addition to the actual data obtained from specific properties, market data publications are also reviewed to provide additional support for market trends (such as Apartment Data Service (ADS) for market data on apartments, CoStar Group for office, retail, or warehouse data and sales information, State Comptroller Hotel/Motel Report, etc.). Other publications, such as Korpacz, REIS, and IREM, are used for capitalization rates, typical holding periods for real estate investments, interest rates and other pertinent real estate criteria. A variety of real estate data is also available via the internet that is helpful in the establishment of market values. This information is often incorporated into market analysis and includes market trends, labor statistics, sales information, development areas, economic indicators, and financial data to name a few.

Annually, prior to hearings and after the sales have been researched, verified, keyed into the database, and quality control has been completed, the sales data is summarized and produced into an electronic file. This electronic sales file, known as the *Vacant Land Sales* and *Commercial Improved Sales Report*, categorize the sales by property use type, location and chronological order. These sales are only available to the public once a protest has been filed.

Data Maintenance

Information on building permits is collected from various cities within Harris County, and from unincorporated areas of the county. These permits are matched to the district's existing property records. Accounts that have building permits are electronically placed into virtual work packs. The work packs are sorted by school district and map facet order and are electronically assigned to appraiser work queues. The field appraisers list new construction, note demolition, and record any changes in physical characteristics for properties within their specific work queues. When the packs are completed, they are routed to the supervisor for quality improvement checks. Once the results of the field visit are in the system, the parcels are available to be valued and later noticed.

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 assessment date. 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, non-conforming use, multiple uses, speculative use, excess land, or a different optimum use if the site were vacant. For vacant tracts, the highest and best use is considered speculative based on the surrounding land uses. Improved properties reflect a wide variety of highest and best uses which include, but are not limited to, office, retail, apartment, warehouse, light industrial, special purpose, or interim uses. In many instances, the property's current use is the same as its highest and best use. This analysis insures that an accurate estimate of market value (sometimes referred to as value in exchange) is derived.

Conversely, 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: 1) no coercion of undue influence over the buyer or seller in an attempt to force the purchase or sale, 2) well-informed buyers and sellers acting in their own best interests, 3) a reasonable time for the transaction to take place, and 4) payment in cash or its equivalent.

Model Specification

Area 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. Local publications are also reviewed to lend detailed support to the various assumptions utilized in the valuation of real estate.

Neighborhood Analysis

Published market studies such as Apartment Data Service (ADS), REIS and CoStar Group for office, retail and warehouse properties provide current market data by property segment. The neighborhood is comprised

of the land area and commercially classed properties located within the boundaries of this taxing jurisdiction. Neighborhood analysis involves the examination of how physical, economic, governmental and social forces and other influences affect property values.

The effect of these forces is also used to identify, classify, and organize comparable properties into smaller, manageable subsets of the universe of properties known as neighborhoods. In the mass appraisal of commercial properties, these subsets 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. Apartments, offices, retail, and warehouses have thirty-six, thirty, twenty-four, and sixteen delineated economic (market) areas, respectively. Economic area identification and delineation by each major property use type is the benchmark of the commercial valuation system. All income model valuation is economic area specific. Economic areas 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 Valuation Manual*.

Model Calibration

Model calibration involves the process of periodically adjusting the mass appraisal formulas, tables and schedules to reflect current local market conditions. Once the models have undergone the specification process, adjustments can be made to reflect new construction procedures, materials and/or costs, and rental concessions, 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.

Approaches to Value

Cost Approach

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 include the derivation of RCN of all improvements. These include comparative base rates, per unit adjustments, and lump sum adjustments. This approach also employs other appraisal methods, including 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 of time. Our base models are developed utilizing actual cost data from the American Institute of Architects' (AIA) documents acquired during the hearings process, and with a time and location modifier applied as necessary. The national cost services provide these modifiers.

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. Schedules have been developed for improvements with 15, 20, 25, 30, 35, 40, 45, 50, 55, and 60 year expected life. These schedules are then tested to ensure they are reflective of current market conditions. For tax year 2025, an analysis was performed based on the guidelines set forth in the IAAO *Assessment and Administration Handbook*, which helps to determine the appropriate age-life for each property segment. The actual and effective ages of improvements are noted in our mass appraisal system. The effective age estimates are based on the utility of the improvement 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 three levels of renovation and are described in the *Commercial Lister's Manual*. Market adjustment factors such as external and functional obsolescence can be applied if warranted.

Additional depreciation can be applied 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 statistical 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.

Income Approach

The income approach to value was applied to real properties that are typically viewed by market participants as "income producing" and for which the income methodology is considered a leading value indicator.

The first step in the income approach pertains to the estimation of market rent on a per unit basis. This is derived primarily from actual rent data furnished by property owners and from local market 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 in 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, 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 and is applied in the model over what is typical for that type of property. In addition to the secondary income, subjects valued on a net basis including office buildings, retail and warehouse properties, a pass through income is added to account for recoveries directly associated with the variable expenses and property taxes. This income is referenced as common area maintainence (CAM). The secondary income and the pass through estimates are added to the 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, medical office buildings, warehouses, and Class "A" office buildings are most frequently leased on a triple-net basis, whereby the tenant is responsible for a pro-rata share of taxes, insurance and common area maintenance. In comparison, other classes of office buildings are 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. For example, if the total operating expense in year one 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 being appraised.

Another form of allowable expense is the replacement allowance for short-lived items, such as roof or floor coverings, air conditioning, or mechanical equipment and appliances. When these replacement allowances 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 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, location, quality, condition, design, age, and other variables. Application of the various rates and multipliers must be based on a thorough analysis of the market. These procedures are documented in the *Commercial Valuation Manual*.

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, financial publications, and dialogue with local market participants.

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 discount 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 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 *Procedures for Collecting and Validating Data* section of this report, pertinent data from actual sales of properties, both vacant and improved, is sought 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 analyst an excellent means of judging the present level and uniformity of the appraised values.

Review of Estimates of Value

Field Review

The date of last inspection, extent of that inspection, and the HCAD appraiser/analyst responsible are listed in the CAMA system. If a property owner disputes the district's records concerning this data in a protest hearing, the property record may be altered based on the credibility of the evidence provided. Typically, a field review is requested to verify this evidence for next year's reappraisal. In addition, if a building permit is filed for a property indicating a change in characteristics, the property is added to a work file. Although every property cannot be inspected each year, each appraiser designates certain segments of their area of responsibility to conduct field checks. A reinspection program is in effect where each commercial account will be inspected every three years, in the field or in office. In the field, the appraiser will inspect the condition of the structures, and add or remove any structures, where applicable.

Due to time constraints, commercial analysts must prioritize their field review by specific use type. An effort is made to field review economic areas experiencing large numbers of remodels, renovations, or retrofits, changes in occupancy levels or rental rates, new leasing activity, new construction, or areas experiencing wide variations in sale prices. Additionally, the analyst frequently field reviews subjective data items such as building class, quality of construction, condition, and physical, functional, and economic obsolescence factors contributing significantly to the market value of the property. In some cases, field reviews are warranted when sharp changes in occupancy or rental rate levels occur between building classes or between economic areas. Once preliminary estimates of value have been generated in these targeted areas, the analyst tests these estimates against their own appraisal judgment. While in the field, the analyst physically inspects 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 performed in compliance with the guidelines contained in the *Commercial Valuation Manual*. This manual outlines the application of the three approaches to value and Section 4 of the manual details the derivation of final value estimates by property use type. This manual is rigorously maintained and was last updated in 2024.

Office reviews are typically limited by the data presented in valuation reports. Valuation 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, property characteristics, income model attributes or overrides, economic factor (cost overrides), and special factors affecting the property valuation such as the last inspection date and a three years sales history (USPAP property history requirement for non-residential property). The analyst 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 analyst's review is limited to properties in their area of responsibility by improved property type or geographic area (commercial vacant land).

Once the analyst is satisfied with the level and uniformity of value for each property within their area of responsibility, the estimates of value are designated as ready for noticing. Critical elements of the noticing process are low and high value edits set for each use type by division management. Each parcel is subjected to the value parameters appropriate for its use. If the parcel's total value exceeds the tolerance parameters, it fails the value edits and it is not available for noticing. Therefore, although the value estimates are determined in a computerized mass appraisal environment, value edits flags enable an individual parcel review of value anomalies before the estimate of value is released for noticing.

Statistical and Capitalization Analysis

Statistical analysis of final values is an essential component of quality assurance. This technique 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. Measures of central tendency and dispersion generated from sales ratios are available for each property type by land use code (LUC).

These summary statistics, including but not limited to, the weighted mean, standard deviation, and coefficient of variation, provide the analysts 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.

An analyst reviews all commercial property types on an annual basis according to LUC and utilizing the sales ratio analysis tool. The first phase involves ratio studies, which compare the recent sales prices of properties to the appraised values of the 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 appraised values. The analyst, 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 acceptable.

Potential gross rent estimates, occupancy levels, secondary income, allowable expenses (inclusive of non-recoverable and replacement reserves), net operating income, capitalization rate, and multipliers are continuously reviewed utilizing frequency distribution methods or other 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.

Appraisal Performance

Comparative Appraisal Analysis

The commercial division 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, warehouse usage, or special use). The objective of this evaluation is to determine appraisal performance of sold and unsold properties. The division examines the average unit prices of sales, the average unit appraised values of the same parcels, and the average value changes of sold versus unsold properties. These studies are conducted on substrata, such as building class, and on properties in various economic areas. In this way, overall appraisal performance is evaluated geographically, by specific LUC to discern whether sold parcels have been selectively appraised. When sold parcels and unsold parcels are appraised equally, the average unit values are similar. These horizontal equity studies are performed prior to annual noticing.

Sales Ratio Study

The purpose of the district's commercial sales ratio study is to provide a statistical assessment of appraisal performance. The study determines the quality of the commercial property mass appraisal through statistical measures of appraisal level and uniformity. The study was conducted using the guidelines set forth in the IAAO current *Standard on Ratio Studies*. Properties within a school district are considered to be "similarly situated" for the purposes of Sec 41.43 (b) (2), Tax Code.

Texas does not require mandatory sales disclosure; consequently, the district does not have access to all property transactions within Harris County. The study sample is limited to sales information provided by commercial vendors or sales submitted voluntarily by the property owner. A ratio study was developed for each school district using the sales period from January 2023 to January 2025 in order to increase the representativeness of the sample (IAAO, *Fundamentals of Mass Appraisal*, p. 237). Sales prices were adjusted for changes in price levels from the time of the sale to the January 1, 2025 appraisal date. Time adjustments were applied to warehouses, retail, apartments, medical-related properties and offices. To the extent possible, data errors, tieback accounts, characteristic changes, and other factors that might produce an erroneous sales ratio were identified and corrected. Sales identified as invalid transactions, such as atypical financing, sales between relatives, corporate affiliates, estate sales, and sales with partially complete new construction were excluded from the ratio study. The data was assumed to represent the distribution of properties within each school district.

The commercial median ratio was used to determine the appraisal level for Harris County and each ISD overall. Additionally, each ISD was stratified and analyzed by property category, including vacant land (state category "C/D"), multifamily (state category "B"), and commercial improved (state category "F") to determine assessment levels and uniformity among major property groups. The study used the median value (non-parametric statistics) as a measure of central tendency because it is not influenced by extreme outliers. The coefficient of dispersion (COD), a measure of variability that relates to the distribution of the ratios, was also calculated for each ISD and individual property group.

Agricultural Appraisal Section

Definition of Agricultural Value

Net to land values is the average annual net income that a class of land would be likely to have generated over a five-year period. The average net income is divided by the cap rate to arrive at the productivity value.

Scope of Work

The mass appraisal of agricultural (Ag) property includes all property classified as 1-d-1 and 1-d agricultural uses, which are appraised on the land's ability to produce income from agriculture or timber production. The mass appraisal of agricultural property involves applying similar values within the same agricultural categories and classes. In Harris County, this involves approximately 4,911 accounts. The agricultural appraisal section staff includes a manager, three appraisers, and one clerical position.

The section appraises agricultural property according to the Tax Code guidelines. Appraisal values are calculated using the cash lease method. A cash lease (cash rent) is an agreement between landowner and tenant to lease property at a fixed cash payment. Fractional interest (UDI) or partial holdings of real property are appraised for the entire tract and value prorated based on eligibility and prorated interest. The section maintains and qualifies nominal value and special value accounts.

Procedure for Collecting and Validating Data

Approximately one-third of the 1-d-1 agricultural properties are required to reapply each year. Lease data is collected each year and used to calculate productivity values. A modified income approach to valuation is used in calculating these values.

Data Maintenance

The 2025 agricultural appraisal process began on September 2, 2024. Field review of all agricultural accounts required to reapply in 2025 were conducted. Applications were evaluated for approval or denial using field review information.

Appraisal Performance

The PTAD of the State Comptroller's Office regularly reviews all values and procedures used in the calculation of the agricultural values. The staff also routinely evaluates its own valuation procedures. Additionally, the Harris County Agricultural Advisory Board reviews our values and appraisal process.

Business/Industrial Property Division
Industrial Valuation Section

Scope of Work

Industrial Real Property (F2), Industrial Personal Property (L2), Utilities (Js), and Minerals (Gs)

The Business and Industrial Property Division is responsible for developing fair and uniform market values for all improved industrial real property, industrial personal property, utilities, and minerals in Harris County. The division appraised 6,042 industrial real, 13,706 industrial personal, 4,545 utility, and 7,274 mineral properties.

Procedure for Collecting and Validating Data

The division and contract appraisal staff inspect assigned properties to obtain information about buildings, site improvements, equipment, and various items of personal property. They also use the information provided by property owners about all costs associated with the purchase, installation, and construction of both real and personal property assets. The individual characteristics of the property are the primary factors that drive the appraised value.

The division has adopted building listing procedures from the Harris Central Appraisal District (HCAD) commercial listers manual to standardize data collection for property categorized as industrial. This enables the appraiser to utilize the system to value industrial buildings for uniformity. An extended range of variations may exist within the same class of industrial property and there are several property types within each industrial category.

Industrial personal property also consists of many different classes of assets with significant variation within each class. The division has adopted the convention of listing assets and estimating the effective age of the assets in the field. The field listing is then compared with the information furnished by property owners during the final valuation review.

As new facilities are built, appraisal personnel collect real and personal property data necessary to value the property. This information is updated each time the property is reviewed. Building permit information is also received from taxing units. Other sources of data include publications such as the Texas Register regarding waste control permits, legal notices published in newspapers, and various refining and chemical industry magazines regarding new construction.

Appraisal personnel periodically visit assigned plants. All industrial accounts are visited at least once every three years. The frequency of the visit is determined by the nature of the business conducted at each facility. For example, refineries and chemical plants are continually changing or adding to processes to extract greater efficiencies or make new products, but machine shops may not add or remove equipment for several years.

For comparison, when conducting a field visit, the appraisers will bring historical data on the site improvements and the previous listing of personal property at the facility. Changes to the existing structures and personal property are noted and this information is used for updated value estimation purposes. If cost information for the real or personal property is supplied later, the field data is compared to the cost information to judge the accuracy of the information provided.

New appraisers receive on-the-job training by accompanying experienced appraisers who have performed field visits and appraisal functions for several years. Each appraiser is responsible for the accuracy of their valuation work, but a new appraiser is required to consult experienced appraisal staff regarding their value estimates. Based on the nature and complexity of the business, the division will determine which properties are valued by appraisal firms instead of district staff.

The main source of mineral data is from the Railroad Commission of Texas as reported by operators. As a monthly activity, the data processing department receives data tapes or electronic files which consist of updated and new well production data. Other discovery tools are fieldwork by appraisers, financial data from operators, trade publications, and city and local newspapers. Other members of the public often provide information regarding new wells and other useful facts related to the property valuation.

Another crucial set of data to obtain is the ownership of these mineral interests. Typically, a mineral lease is fractionated and executed with several if not many owners. This information is typically requested (under a promise of confidentiality concerning owners' personal information) from pipeline purchasers and/or other entities (such as operators) who have the responsibility of disbursing the income to the mineral interest owners. Another source of ownership information is through the taxpayers themselves who file deeds of ownership transfer and/or correspondence directly.

Electronic and field data collection requires organization, planning, and supervision of the appraisal staff. Data collection procedures for mineral properties are generally accomplished globally by the company; i.e., production and price data for the entire state is downloaded at one time into the computer system. Appraisers also individually gather and record specific information in the appraisal file records, which serves as the basis for the valuation of mineral properties.

Appropriate revisions and/or enhancements of schedules or discounted cash flow software are annually made and then tested before the appraisals are performed. Calibration typically involves performing multiple discounted cash flow tests for leases with varying parameter inputs to evaluate the correlation and relationship of indicators such as Dollars of Value Per Barrel of Reserves, Dollars of Value Per Daily Average Barrel Produced, Dollars of Expense Per Daily Average Barrel Produced, and Years Payout of Purchase Price (Fair Market Value).

Data for utility properties is available from annual reports submitted to regulatory agencies whereby future income may be estimated, and then this future income may be converted into an estimate of value. The valuation of an entire company by this method is sometimes referred to as a Unit Value. Many refer to this as capitalization. As with any method, the final value estimate is no better than the reliability of the input data. The underlying assumption is that people purchase the property for the future income the property will yield.

The relevant income that should be used in the valuation model is the expected future net operating income after depreciation but before interest expense (adjustments for Federal Income Taxes may or may not be required).

Assumptions of this method are:

- Past income and expenses are a consideration, as they may be a guide to future income, subject to regulation and competition.
- The economic life of the property can be estimated.
- The future production, revenues, and expenses can be accurately forecasted.

Future income is less valuable than current income, and so future net income must be discounted to make it equivalent to the present income. This discount factor reflects the premium of present money over future money, i.e., interest rate, liquidity, investment management, and risk.

Highest and Best Use Analysis

An industrial property's current use is generally the highest and best use of that property. Industrial facilities are mostly located in areas that support industrial use. In areas where mixed-use does occur, the appraiser estimates the effect of this factor on the highest and best use.

Model Specification

Area Analysis

The scope of market forces affecting industrial products and the capital goods used in the production process tends to extend beyond regional considerations. The effects of information and transportation technology are such that most industrial market forces are measured globally. One exception to this general concept is the market for industrial land. The pricing of land tends to be closely tied to possible alternative uses in the area. For this reason, appraisers assigned to land valuation analyze market forces for specific areas and adjust land value schedules appropriately.

Neighborhood Analysis

Neighborhood analysis is not performed due to the non-homogeneous nature of the property type. Industrial properties do not have the type of generic uniformity that is appropriate for neighborhood models.

Market Analysis

Market analysis is the basis for finalizing value estimates on industrial properties. Even though many industrial properties are unique, the market for this property type is analyzed to see how the value of similar properties is affected by market forces. Industrial properties, such as machine shops, have many similar facilities and may be compared to the subject property in terms of the type and size of equipment, type of property fabricated or serviced at the subject facility, and other factors. Those similarities help the appraiser estimate the value of the subject property. Some facilities, such as specialty chemical plants, are so unique that the appraiser must use the closest available plant in terms of output quantity, type of product manufactured, and other factors to help estimate the value of the subject property.

Many industrial properties use similar buildings and types of manufacturing or service equipment; however, how the entire business operates makes the facility unique. Information from similar businesses

is used to evaluate the real and personal property values of a particular business, but the individual characteristics of the business will determine the overall value.

Many of the buildings encountered at industrial facilities are generic in construction, such as pre-engineered metal buildings. The cost per square foot to construct these structure types can be used to estimate values at facilities that have similarly constructed buildings***; h***owever, the building as constructed will have differences that must be considered when estimating the final value of the property being reviewed.

A similar analysis is used for personal property. Many personal property items, such as furniture and fixtures, computers, and even machinery and equipment are generic in construction, but individual characteristics that affect value, such as usage, environment, and level of care will affect the final value estimation. When cost data for this property type is available and considered reliable, it is used for value estimation purposes at other plant facilities. However, on-site inspection and information provided by the property owner will affect the final value estimation.

Model Calibration

The cost tables used are an integration of information received from local builders, AIA documents, and nationally recognized valuation publications for all property types. The real property valuation schedules are reviewed annually using the information available. Similarly, we use a calculated index factor compiled from data in the Chemical Engineering Magazine to adjust our tank farm models.

HCAD develops schedules based on nationally recognized valuation publication depreciation factors for use in the valuation of all business and industrial personal property. In the division, six of the most common light industrial SIC codes include model values. These models are updated regularly and are used to estimate the value of new accounts and those in which no rendition was filed. The contract appraisal firms use similar schedules and methodologies based on their experience in valuing real and personal property.

Review of Estimates of Value

Field Review

Annual re-inspection occurs on real and personal property accounts where an active abatement exists or there is evidence of change. Otherwise, these accounts are typically revisited on a three-year cycle. Properties assigned to contract appraisal firms are reviewed annually because changes occur more frequently at these facilities.

The results of prior year hearings, the existence of building permits, or the sale of property can trigger a field visit. Evidence is often presented during a protest hearing that supports a value adjustment. The issues presented in the hearing are subsequently field-checked to determine if these influences will be ongoing and warrant permanent value adjustment or are transitory and a permanent adjustment is not warranted. This information is recorded to assist appraisers during valuation. Building permits must be field-checked to determine the effects on existing structures. New construction is noted and the information necessary to value the structure is recorded. Additionally, any structure demolition is noted, and the improvement value is adjusted accordingly. Part of the field review includes noting any land characteristics that would affect the land value. The contract appraisal firms advise the division of any characteristics that would affect the

value of the land associated with that assigned facility. The land values used for industrial properties are coordinated with the Commercial Property Division to maintain continuity of land values.

Results of the 2025 Field Review

A field review of industrial real and personal property is generally conducted over a three-year cycle. The accounts assigned to contract appraisal firms are field-reviewed annually. The district and contract appraisal staff field visited 937 real property accounts for 2025. The accounts inspected were those with building permits, tax abatements, issues raised during the 2024 hearings, and those that had not been inspected in the last 3 years. Tax abatement-related accounts have a yearly field visit requirement regardless of construction at the facility. Mineral and utility properties are not field reviewed because it is not possible to inspect properties underground and not practical to inspect every electric substation in the county. These properties are office reviewed as stated in-office review results below.

Field review also included the inspection of personal property, which occurs when visiting the real property accounts, or as independent visits when the real property is not valued by the industrial section, such as a warehouse or pipe yard.

Office Review

All properties not subject to field review are reviewed in the office by the appraisers assigned to specific real or personal properties. The office review relies on historical information in the real or personal property file as the basis for estimating the value to be placed on the property for the current tax year.

When valuing real property, the characteristics of the property being reviewed are the driving force in value estimation. Experience in valuing other real property, such as a similar building elsewhere, helps the appraiser estimate the value of the subject improvements.

When valuing personal property, the type of furniture, equipment, and computers will be used along with any cost data provided by the property owner to estimate the value. Experience in valuing a similar property at other facilities helps the appraiser estimate the value of the subject facility. Individual characteristics of the property, such as usage and maintenance, will also have a bearing on the value calculated using district schedules.

Results of the 2025 Office Review

The district and contract appraisal staff conduct office reviews on both field-inspected and non-field-inspected real property. The real property office review consists of the verification of jurisdiction codes, land value, new construction value, and applicable depreciation using the age of construction, building condition, or facility usage.

The district and contract appraisal staff conduct office reviews on both field-inspected and non-field-inspected industrial personal property. The personal property office review consists of determining the active status of the account and estimating the value using field-collected information and information from the property owner. Industrial personal property accounts include warehouse inventories, tank farm inventories, pipe yard inventories, industrial facilities, and communication properties.

Mineral and utility accounts are reviewed by contract appraisal staff. The active status of the account and the property value estimates are determined using information from the mineral royalty owner, mineral working interest, and state agencies for mineral or utility properties.

Appraisal Performance

Sales Ratio Study

Typically, there are not enough sales of industrial properties to show the representativeness of that class of property in a ratio study. Ratio studies of industrial properties usually rely on independent appraisals as an indicator of market values.

Comparative Appraisal Analysis

This type of analysis is usually not done on industrial properties due to the unique nature of the property and because of time and budget constraints regarding available appraisal staff. The real property values can be compared on an average value per square foot of structure basis, but the differences from one facility to another must be carefully compared because it is unlikely that two different facilities are going to build like improvements and use them in similar ways. Similarly, personal property values can be compared per category, such as furniture and fixtures, and machinery and equipment, but the same comparison of the type and use of the property must be examined to ensure property comparability.

Business/Industrial Property Division
Business Personal Property Section

Scope of Work

Commercial Personal Property (L1) and Dealer Inventory (S1)

The Business and Industrial Property Division is responsible for developing fair and uniform market values for all dealer inventory and commercial personal property in Harris County. The division appraises 3,039 dealer inventory and 161,394 commercial personal property accounts. Commercial personal property accounts include leased asset and multi-location accounts with 371,227 distinct locations and 1,335,715 items, vehicle accounts with 278,370 items, vessel accounts with 2,129 items and business and commercial aircraft accounts with 1,682 items in Harris County.

Procedure for Collecting and Validating Data

A common set of data characteristics for each personal property account in Harris County is collected in the field and data is entered into the HCAD tangible computer system. The property characteristic data drives the system. The field staff, consisting of twenty (20) appraisers, two (2) supervising appraisers, and a senior manager, collect the field data.

Personal property data collection procedures are 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 updated in 2024.

Sources of Data

Dealer Inventory

Appraisers utilize discovery information such as the TxDMV to identify new dealer inventory accounts. Dealers are required to provide monthly statements and annual declarations. Dealers without sales, or who sell vehicles predominately at wholesale, are required to render their inventory value as of January 1. HCAD uses information from the TxDMV to identify dealers who have failed to submit their annual declarations but still have an active dealer license. HCAD calculates a median value by dealer type, which is considered during the valuation of dealer accounts that failed to provide either a declaration or a rendition.

Business Personal Property

In addition to data collected and verified by the field appraisers, renditions, state sales tax listings, and the assumed names database from the county clerk's office are also researched to discover personal property. Tax assessors, city and local newspapers, business journals, and the public often provide the district information regarding new personal property and other relevant facts related to property valuation.

Transportation (Vehicles, Vessels, and Aircraft)

An outside vendor identifies business vehicles registered in Harris County and provides HCAD with a list of these vehicles. The vendor developed this listing from the Texas Department of Motor Vehicles (TxDMV) Title and Registration Division records. Vessel registration information is obtained from the National Oceanic and Atmospheric Administration (NOAA). Aircraft information is downloaded from the Federal Aviation Administration (FAA) website with aircraft in Harris County identified by departures from Harris County airports.

HCAD also uses national and regional valuation publications to research value benchmarks. Other sources of data include property owner renditions and field inspections.

Leased and Multi-Location Assets

The primary source of leased and multi-location assets is property owner renditions. Data may also be provided in the reports of field inspections.

Highest and Best Use Analysis

The highest and best use of a 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.

Model Specification

SIC Code Analysis

Four-digit numeric codes, called Standard Industrial Classification (SIC) codes, were developed by the federal government to identify business entities having common attributes. These classifications are used by HCAD to delineate personal property by business type. HCAD has further stratified these codes by adding alpha suffixes to SIC codes to group business types that have similar personal property characteristics.

SIC code identification and delineation is the cornerstone of the personal property valuation system. All the personal property analysis done in association with the personal property valuation process is SIC code specific. There are 1,084 personal property SIC codes. SIC codes are delineated based on observable aspects of homogeneity and are periodically reviewed to determine if further stratification is warranted.

Model Calibration

Cost Schedules

Analysts build cost schedules based on SIC codes. Cost data from property owner renditions, hearings, state schedules, and published cost guides are utilized to develop these cost schedules. 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 SIC codes are in a price-per-unit format, such as per room for hotels.

Statistical Analysis

Summary statistics, including the median and mean, provide an analytical tool by which to determine the level of appraised value by SIC code. A review of the standard deviation or coefficient of dispersion can discern appraisal uniformity within SIC codes.

Final Models: Depreciation Schedule and Trending Factors

The primary approach to the valuation of business personal property is the cost approach. The replacement cost new (RCN) is developed either from property owner's reported historical cost or from existing valuation models. The trending factors used to develop RCN are based on the national average for equipment as published in the October report of the *Marshall Valuation Service*. The percent good depreciation factors are based on the depreciation schedules for furniture, fixtures, and equipment as published in the *Marshall Valuation Service* for October of each year. RCN and percent good depreciation factors are used to develop replacement cost new less depreciation (RCNLD) value estimates as follows:

MARKET VALUE ESTIMATE = HISTORICAL COST x INDEX x PERCENT GOOD

This mass appraisal percent good depreciation schedule is used to ensure that estimated values are uniform and consistent within the market. The valuation process has two main objectives: 1) analyze and adjust existing SIC models, and 2) develop new models for business classifications not previously integrated. The delineated sample is reviewed for accuracy of SIC code, units (typically square feet), field data, and original cost information. Models are created and/or refined using actual original cost data to derive a typical RCN per unit for a specific category of assets. The RCN per unit is depreciated by the estimated age using factors that have been averaged and trended from the fixtures and equipment depreciation tables of the *Marshall Valuation Service*.

The data sampling process is conducted in the following order: 1) prioritize SIC codes for model analysis; 2) compile data and develop reports; and 3) field check selected samples. The models are built and adjusted using developed software (TG_MVAT). The models are then tested against the previous year's data. The typical RCN per unit is determined by a statistical analysis of the available data.

The environment includes 263 models for business groups identified by the most common SIC codes in the business population. 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 year data exist or for which current year rendered information is available. The calculated current or prior year value is compared to the indicated model value by a valuation program. If the value tested is within an established 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 from the prior year.

Dealer Inventory

Dealer inventory is valued utilizing the dealer’s prior year sales. The information is received by HCAD from the dealer as submitted on their dealer’s inventory declaration. The form includes a listing of the total annual sales from the inventory in the prior year. The market value for the year is determined based on their average monthly sales.

Transportation (Vehicles, Vessels, and Aircraft)

Value estimates for vehicles are provided by an outside vendor and are based on data furnished by National Market Reports. Vehicle valuation is conducted by a valuation program that selects the value of each vehicle based on an identified hierarchy of values which includes vendor value, depreciated cost, and rendered value of the selections.

Vehicles, vessels, and aircraft are manually valued using depreciated cost or nationally recognized valuation guides such as NADA, National Auto Research, Aircraft Blue Book, AVITAS, Airline Price Guide, etc. to develop the estimate of market value.

Review of Estimates of Value

A valuation computer program 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 a valuation program and pass or fail preset tolerance parameters by comparing appraised values to the prior year and model values. Analysts individually review accounts that fail the tolerance parameters.

Vehicle, vessel, and aircraft master files are loaded into the system, and items are programmatically matched to existing accounts. The items remaining after the matching process are sorted by owner name, prioritized by the number of items owned, and a report is created for each type. Many of these items are matched both programmatically and manually to existing accounts or new accounts are created as needed. A pre-populated “discovery” rendition is sent to owners of items not matched to existing accounts. Accounts are created, as necessary, from responses to these “discovery” renditions.

Leased and Multi-Location Assets

Leased and multi-location assets are valued using the index factor and percent good depreciation schedules mentioned above. If the asset to be valued in this category is a vehicle, then published book values or similar values provided by a vehicle data vendor are adjusted according to current economic criteria. Leasing and multi-location accounts, reported by the property owner electronically with a large volume of assets are loaded programmatically. Accounts that are rendered by hard copy are keyed manually. After matching and data entry, reports are generated and reviewed by an appraiser.

Field Review

The appraisal staff reviews personal property accounts to review all accounts within a three-year cycle. In addition to the annual field review, field checks are conducted on accounts discovered through hearings, business publications, and various correspondence.

Results of the 2025 Field Review

The field staff inspected 40,908 personal property accounts as of April 1, 2025. Following the IAAO Standard on Valuation of Personal Property, an emphasis is placed on new accounts. A total of 9,753 new accounts were set up from this year’s field effort with preliminary field values placed on these accounts.

Appraisal Performance

A personal property ratio study will be produced as equity evidence once a representative number of renditions have been keyed. The results will be available as a supplement to the Mass Appraisal Report.