El Paso Central Appraisal District

MASS APPRAISAL REPORT
SEPTEMBER, 2020

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1.0 INTRODUCTION

1.1 Scope of Responsibility

The El Paso Central Appraisal District (CAD) has prepared and published this report to provide our citizens and taxpayers with a better understanding of the CAD's responsibilities and activities.

The CAD is a political subdivision of the State of Texas created effective January 1, 1980. The provisions of the Texas Tax Code govern the legal, statutory, and administrative requirements of the CAD. A nine-member board of directors, appointed by the taxing units with voting entitlement within the boundaries of El Paso County, constitutes the CAD's governing body. The Executive Director/Chief Appraiser, appointed by the board of directors, is the chief administrator and chief executive officer of the CAD.

The CAD is responsible for local property tax appraisal and exemption administration for thirty-eight (38) jurisdictions or taxing units in the county. Each taxing unit, such as the county, city, school district, municipal utility district, etc., sets its own tax rate to generate revenue to pay for such things as police and fire protection, public schools, road and street maintenance, courts, water and sewer systems, and other public services. CAD appraisals allocate the year's tax burden on the basis of each taxable property's January 1st market value. We also determine eligibility for various types of property tax exemptions such as those for homeowners, the elderly, disabled veterans, and exempt organizations.

The CAD appraises all taxable property at its "market value" as of January 1st except as otherwise provided by the Tax Code. Under Tax Code Section 1.04, "market value" means the price at which a property would transfer for cash or its equivalent under prevailing market conditions if:

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

The Tax Code defines special appraisal provisions for the valuation of residential homestead property (Sec. 23.23), agricultural productivity value (Sec. 23.41), real property inventory (Sec. 23.12), dealer inventory (Sec. 23.121, 23.124, 23.1241 and 23.127), nominal (Sec. 23.18) or restricted use properties (Sec. 23.83) and allocation of interstate property (Sec. 21.03). The owner of real property inventory may elect to have the inventory appraised at its market value as of September 1st of the year proceeding the tax year to which the appraisal applies by filing an application with the chief appraiser requesting that the inventory be appraised as of September 1st.

The Texas Tax Code, under Sec. 25.18, requires each appraisal board to adopt a written plan each even-numbered year for the periodic reappraisal of all property within the boundaries of the appraisal district. The written plan must provide for the update of appraised values for all real property and personal property in the appraisal district at least once every three years. The CAD's current policy is to conduct a general reappraisal every three years. However, appraised values are reviewed annually and are subject to change for purposes of equalization.

CAD uses specific information about each property to calculate the appraised value of real estate. We compare that information with the data for similar properties, and with recent market data using computer-assisted appraisal programs, and recognized appraisal methods and techniques. The CAD follows the standards of the International Association of Assessing Officers (IAAO) regarding its mass appraisal practices and procedures, and subscribes to the standards promulgated by the Appraisal Foundation known as the Uniform Standards of Professional Appraisal Practice (USPAP) to the extent they are applicable. In cases where the CAD contracts for professional valuation services, the contract that is entered into by the appraisal firm requires adherence to similar professional standards.

1.2 Personnel Resources

The Office of the Chief Appraiser is responsible for overall planning, organizing, staffing, coordinating, and controlling of CAD operations. The Administration Department's function is to plan, organize, direct and control the business support functions related to human resources, budget, finance, records management, purchasing, fixed assets, facilities and postal services. The appraisal departments are responsible for the valuation of all real and business personal property accounts. The appraised property types include commercial, residential, business personal, and industrial.

The CAD's appraisers are subject to the provisions of the Property Taxation Professional Certification Act and must be duly registered with the Texas Department of Licensing and Regulation. The Deeds and Exemptions department administers ownership and exemptions. The Mapping and GIS department maintains property identification and legal descriptions. These departments also provide support functions including records maintenance and assistance to property owners. The CAD also provides support staff for the Appraisal Review Board. The appraisal district staff consists of 140 employees with the following classifications:

Executive (7)		**Appraisers & Technicians (50)**	
Executive Dir/Chief Appraiser	1	Appraiser II	11
Assist Chief Appraiser	1	Appraiser III	7
Director Of Administrative Services	1	Entry Level Appraiser IV	3
Director Of Appraisal Services	1	Appraiser IV	10
Director Of Litigation & Appeals	1	Lead Appraiser IV	13
Chief Financial Officer	1	GIS/P&S Specialist I	2
Chief Human Resource Officer	1	GIS/P&S Specialist II	3
		GIS Records Specialist	1
Managers and Supervisors (15)			
ARB Coordinator	1	**Administraive Support (54)**	
Administration Coordinator	1	Accounting Clerk	1
Application Support Manager	1	Appraisal Records Specialist	28
Business Personal Property Manager	1	Appraisal Records Specialist II	2
Commercial Manager	1	Customer Service Representative I	3
Deeds & Exemptions Coordinator	1	Customer Service Representative II	3
Plat & Subdivision/GIS Manager	1	Executive Assistant	1
Human Resources Team Leader	1	Field Specialist	7
Litigation Coordinator	1	Financial Specialist	1
Maintenance Supervisor	1	Fiscal Clerk II	2
Network Manager	1	Human Resources Specialist	1
Records Supervisor	1	Legal Assistant	1
Residential Property Manager	1	Litigation Specialist II	1
Statistics Coordinator	1	Maintenance II	1
Training Facilitator	1	Project Specialist	1
		Research & Development Clerk	1
Professional (9)			
Business Analyst	4	**Information Systems (6)**	
Data Analyst	2	Administrative IT Support Technician	1
Software Developer	2	Desktop Support Technician	1
Taxpayer Liaison	1	Computer Program Analyst	1
		Senior Software Engineer	1
		Systems Security Administrator	1
		Database Administrator	1

1.3 Data

The CAD is responsible for establishing and maintaining approximately 428,476 real and business personal accounts covering 1054 square miles within El Paso County. This data includes property characteristics, ownership and exemption information. Appraisers update property characteristic data on new construction through an annual field effort. Field review priorities depend on existing property data of the last field inspection date. CAD staff routinely validates sales during a separate field effort. However, numerous sales are validated as part of the new construction and data review field activities. CAD acquires general trends in employment, interest rates, new construction trends, and cost and market data through various sources, including internally generated questionnaires to buyers and sellers, university research centers, and market data centers and vendors.

The CAD has a geographic information system (GIS) that maintains cadastral maps and various layers of data, including zip code, facet and aerial photography. The CAD's website makes a broad range of information available for public access, including but not limited to detailed information on the appraisal process, property characteristics data, certified values, protests and appeal procedures, property maps, and a tax calendar. Downloadable fields of related tax information and appraisal district forms, including exemption applications and business personal property rendition forms are also available.

1.4 Information Systems

The department designs, builds, operates and maintains its information systems including but not limited to:

- Data processing,
- Software applications,
- Public website,
- Geographical information systems (GIS),
- Custom applications.

CAD's CAMA system is a high-availability client/server environment. CAD's productivity suite is Microsoft *Office365* available for all computer systems. We use Microsoft SQL2008R2/ SQL2012R2 Enterprise edition for databases. All professional personnel have access to 300 Mbps high-speed internet and all employees have access to the district intranet.

CAD uses Cisco, Websense software to control network access. Proximity cards and video surveillance controls physical access. The Windows active directory controls computer and application access. In addition, each individual application has a proprietary access control. For example, the CAMA system has an internal access control feature to manage proper user access.

CAD uses NetFort LanGuard for SQL to maintain data security outside the CAMA solution. On the same token, the CAMA software maintains a controlled and adequate set of tools that allows for the granting and denial of user rights to system modules and updating, viewing, and running features, and utilities within the modules. It also maintains a change log of inserts, updates, and deletions in appraisal records. The system records each transaction with a unique change ID, the name of the machine used to implement the transaction, the logged-on user, date time stamp, affected roll year, transaction type, field, and before and after values.

The CAMA software is Harris Govern/True Automation's PACS release 8.1.31.0096 The GIS systems software is ESRI's ArcGIS Server 10.5.1 with ArcGISPRO 2.1 and ArcMap Desktop 10.5.1

2.0 INDEPENDENT PERFORMANCE TEST

According to Chapter 5 of the Texas Tax Code and Section 403.302 of the Texas Government Code, the State Comptroller's Property Tax Assistance Division (PTAD) conducts a bi-annual property value study (PVS) of each Texas school district and each appraisal district. As a part of this bi-annual study, the code also requires the Comptroller to:

- use sales and recognized auditing and sampling techniques;
- review each appraisal district's appraisal methods, standards and procedures to determine whether the CAD used recognized standards and practices (MAP review);
- test the validity of school district taxable values in each appraisal district and presume the appraisal roll values are correct when values are valid; and,
- determine the level and uniformity of property tax appraisal in each appraisal district.

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

There are 9 independent school districts in El Paso County for which appraisal rolls are annually developed. The preliminary results of this study are released in January in the year following the year of appraisal. The final results of this study are certified to the Education Commissioner of the Texas Education Agency (TEA) in the following July of each year for the year of appraisal. This outside (third party) ratio study provides additional assistance to the CAD in determining areas of market activity or changing market conditions.

In addition to the PVS, the CAD is subject to a state audit of our governance, taxpayer assistance programs, operating and appraisal standards and methodologies known as the Methods and Assistance Program Review (MAP). The last audit was conducted in 2019. The final result was a perfect score.

In September 2012, the International Association of Assessing Officers (IAAO) awarded CAD the Certificate of Excellence in Assessment Administration. The IAAO required an extensive submission of descriptions of all facets of the operation with supporting documentation. We recertified in September 2018 for this designation.

3.0 APPRAISAL ACTIVITIES

3.1 Introduction

3.1.1 Appraisal Responsibilities

The field appraisal staff is responsible for collecting and maintaining property characteristic data for classification, valuation, and other purposes. Accurate valuation of real and business personal property by any method requires a physical description of business personal property, and land and building characteristics. The appraisal departments are responsible for administering, planning and coordinating all activities involving data collection and maintenance of all commercial, residential and business personal property types which are located within the boundaries of El Paso County. The data collection effort involves the field inspection of real and business personal property accounts, as well as data entry of all data collected into the existing information system. The goal is to periodically inspect residential and commercial properties, where necessary, in El Paso County once every three (3) years, and personal properties every year.

3.1.2 Appraisal Resources

- **Personnel** - The four appraisal departments under the direction of three managers, one coordinator and an appraiser trainer consists of forty-four (44) appraisers, seven (7) field specialists and seven (7) support personnel. (See Attachment A)

- **Data** - The data used by field appraisers includes the existing property characteristic information contained in CAMA (Computer Mass Appraisal System). The data is printed on a property record card, or business personal property data sheets. Other data used includes maps, sales data, income and expense data, fire and damage reports, building permits, photos, actual cost information, obliques and ortho photos via Pictometry.

3.2 Preliminary Analysis

3.2.1 Data Collection/Validation

Data collection of real property involves maintaining data characteristics of the property in CAMA (Computer Assisted Mass Appraisal). The information contained in CAMA includes site characteristics, such as land size, shape, zoning, location, access and topography, along with improvement data, such as square foot of living area, year built, quality of construction, and condition.

Field specialists and appraisers use listing manuals that establish uniform procedures for the correct listing of real property and coding of all properties. The District uses these manuals and coding systems to structure and calibrate the approaches to value. The field specialists and appraisers use these manuals during their

initial training and as a guide in the field inspection of properties. In March 2016, CAD completed a revision of all manuals and made them available on the CAD intranet. If a property owner/agent wants a copy of the listing procedural manual, a written request should be made to the chief appraiser. Manuals are reviewed annually,

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

3.2.2 Sources of Data

The sources of data collection are through the new construction field effort, data review/relist field effort, data mailers, hearings, sales validation field effort, commercial sales verification, newspapers and publications, and property owner correspondence via the internet. A principal source of data comes from building permits and zoning changes received from taxing jurisdictions that require property owners to take out a building permit. Where available, permits are received electronically. Otherwise, staff receive and manually match paper permits with the property's tax account number for data entry. Additional sources of data are:

- Dodge Reports
- CoStar
- LoopNet
- Marshall & Swift
- Taxing entities
- Publications such as TREPP, Real Capital Analytics and Axiometrics
- Property owner correspondence via returned sales questionnaires

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

Property owners are one of the best sources for identifying incorrect data that generates a field check. Frequently, the property owner provides sufficient data to allow correction of records without having to send an appraiser on-site. As the CAD increases the amount of information available on the internet, property owner's requests to correct data inconsistencies will also increase. For the property owner without access to the

internet, letters are often submitted notifying the CAD of inaccurate data. Properties identified in this manner are added to a work file and inspected at our earliest opportunity.

3.2.3 Data Collection Procedures

Field data collection requires organization, planning and supervision of the field effort. Data collection procedures have been established for residential, commercial, and business personal property. The appraisers are assigned throughout El Paso County to conduct field inspections and record information either on a property record card or a business personal property data sheet.

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

3.2.4 Data Maintenance

The field specialists and the field appraisers are responsible for the verification of data entry of his/her fieldwork. This responsibility includes not only verification of data entry, but also quality assurance.

4.0 INDIVIDUAL VALUE REVIEW PROCEDURES

4.1 Field Review

The date of last inspection, extent of that inspection, and the CAD appraiser responsible are listed on the CAMA record. The data in CAMA may be altered based on the evidence provided during a hearing. In addition, CAD uses the change finder, sketch finder components of Pictionary to identify possible changes to properties. Typically, a field inspection is requested to verify this evidence for the current year's valuation or for the next year's valuation. Every year a field review of certain areas or neighborhoods and certain property categories in the jurisdiction are done during the data review/re-list field effort. A concerted effort to inspect all business personal property is conducted annually.

4.2 Office Review

Office reviews are completed on properties where information has been received from the owner of the property. At the request of the property owner, a property card is mailed and they frequently verify the property characteristics or current condition of the property. Appraisers review the properties using aerial photography to compare property data with the property records and makes appropriate corrections. When the property data is verified in this manner, field inspections are not required. In addition, CAD uses the "Change Finder" features of Pictometry. In addition, any property protested that has had an informal hearing or a hearing before the ARB, is considered having been reviewed because of the nature of such hearings and the evidence reviewed during the process.

4.3 Performance Test

Appraisal staff and/or Statistical staff are responsible for conducting ratio studies and comparative analysis. Each department's performance testing is described in the applicable department's chapter.

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

5.0 RESIDENTIAL VALUATION PROCESS

5.1 Introduction

5.1.1 Scope of Responsibility

The Residential Valuation appraisers and/or Statistical staff are responsible for developing equal and uniform market values for residential improved, mobile home and residential vacant property accounts. There are approximately 372,269 such accounts in El Paso County.

5.1.2 Appraisal Resources

- Personnel - The Residential Valuation appraisal staff consists of twenty (20) appraisers, one (1) appraiser trainer, six (6) field specialists and three (3) support staff.
- Data - A common set of data characteristics for each residential dwelling in El Paso County is collected in the field and data entered to the computer.

5.2 Valuation Approach (Model Specification)

5.2.1 Area Analysis

Data on regional economic forces such as demographic patterns, regional location factors, employment and income patterns, general trends in real property prices and rents, interest rate trends, availability of vacant land, water access, and construction trends and costs are collected from private vendors and public sources and provide the CAD with a current economic outlook on the real estate market. Information is gleaned from real estate publications and sources such as continuing education from the International Association of Assessing Officers (IAAO), Texas Association of Assessing Officers (TAAO), Texas Association of Appraisal Districts (TAAD), Property Tax Education Coalition (PTEC) and the Texas A & M University – Real Estate Center.

5.2.2 Neighborhood and Market Analysis

The CAD uses neighborhood analysis to examine how physical, economic, governmental and social forces and other influences affect property values. The effects of these forces are also used to identify, classify, and stratify comparable properties into smaller, manageable subsets of the universe of properties known as neighborhoods. Residential valuation and neighborhood analysis is conducted on each of the political entities known as Independent School Districts (ISD).

The first step in neighborhood analysis is the identification of a group of properties that share certain common traits. A "neighborhood" for analysis 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 can involve the physical drawing of neighborhood boundary lines on a map, but it can also involve statistical separation or stratification based on attribute analysis. Part of neighborhood analysis is the consideration of discernible patterns of growth that influence a neighborhood's individual market.

Few neighborhoods are fixed in character. Each neighborhood may be characterized as being in a stage of growth, stability, decline or revitalization. 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 shifts 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 are the cornerstones of the residential valuation system at the CAD. All the residential analysis work done in association with the residential valuation process is neighborhood specific. Neighborhoods are field-inspected and delineated based on observable aspects of homogeneity. Neighborhood delineation is periodically reviewed to determine if further neighborhood delineation is warranted. Whereas neighborhoods involve similar properties in the same location, a neighborhood group is simply defined as similar neighborhoods in similar locations. Each residential neighborhood is assigned to a neighborhood group based on observable aspects of homogeneity between neighborhoods. Neighborhood grouping is highly beneficial in cost-derived areas of limited or no sales, or use in direct sales comparison analysis. Neighborhood groups, or clustered neighborhoods, increase the available market data by linking comparable properties outside a given neighborhood. Sales ratio analysis, discussed below, is performed on a neighborhood basis, and in soft sale areas on a neighborhood group basis.

5.2.3 Highest and Best Use Analysis

In 2009, the Tax Code Section 23.01(c) was changed and states that "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".

The highest and best use of property is the reasonable and probable use that supports the highest value as of the date of the appraisal. The highest and best use must be physically possible, legally permissible, financially feasible, and derives maximum production. The highest and best use of residential property is normally its current use. This is due in part to the fact that residential development, in many areas, through use of deed restrictions and zoning, precludes other land uses.

Residential valuation undertakes reassessment of highest and best use in transition areas and areas of mixed residential and commercial use. In transition areas with ongoing gentrification, the appraiser reviews the existing residential property use and makes a determination regarding highest and best use. Once the conclusion is made that the highest and best use remains residential, further highest and best use analysis is done to decide the type of residential use on a neighborhood basis. As an example, it may be determined in a transition area that older, non-remodeled homes are economic 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 appraiser reviews properties in these areas on a periodic basis to determine if changes in the real estate market require reassessment of the highest and best use of a select population of properties.

5.3 Valuation and Statistical Analysis (Model Calibration)

5.3.1 Value Schedules

All residential parcels in the CAD are valued from construction cost guidelines using a comparative unit method. The CAD's residential value schedules, originally adopted from a private mass appraisal firm, have been customized to fit El Paso County's local residential building and labor market. The value schedules are reviewed regularly as a result of recent state legislation requiring that the CAD value schedules be within a range of plus or minus 5% from market value.

The CAD performed a county-wide review of the residential value schedules for the 2020 tax year. As part of this process, approximately 448 newly constructed sold properties at various levels of quality of construction in El Paso County were reviewed. The property data characteristics of these properties were verified and photographs were taken of the samples. Of these properties, 411 samples were selected for use in the CAD value schedule review.

The CAD dwelling values were compared against Marshall & Swift, a nationally recognized cost estimator. This process included correlation of quality of construction factors from CAD and Marshall & Swift. The results of this comparison were analyzed using statistical measures, including stratification by quality and reviewing estimated building costs plus land to sales prices. As a result of this analysis, we determined that it was not necessary to adjust existing models. The CAD determined no need for a new regional multiplier in development of our cost process. In addition to the value schedules, applications have been created to

address unique appraisal situations, such as different levels of remodeling and atypical housing features not normally accounted for in the mainframe benchmark value system.

5.3.2 Sales Information

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

5.3.3 Land Analysis

Residential land analysis is conducted by each of the residential land appraisers. The appraisers develop a base lot, primary rate, and assign each unique neighborhood to one of thirty-seven square foot land tables. The square foot land table is designed to systematically value the primary and residual land based on a specified percentage of the primary rate. A computerized land table file stores the land information required to consistently value individual parcels within neighborhoods. Specific land influences are used, where necessary, to adjust parcels outside the neighborhood norm for such factors as view, shape, size, and topography, among others. The appraisers use abstraction and allocation methods to insure that the land values created best reflect the contributory market value of the land to the overall property value

5.3.4 Statistical Analysis

The Statistical staff perform statistical analysis annually to evaluate whether values are equitable and consistent with the market. EPCAD has divided the county into fifteen market areas designated in CAMA as regions and shown in Figure 5.1. They are:

Figure 5.1 Market Areas

A West Area
B Upper Valley Area
C Northeast Area
D Central Area
E East Area
F Lower Valley
G Anthony ISD
H Canutillo
J Clint ISD
K Fabens
L San Elizario ISD
M Tornillo ISD
N City of Socorro
P Socorro ISD Outside El Paso City Limits
R City of Horizon

EPCAD further delineates properties by neighborhoods. The letter in front of each market area will be the first character in the GEO identification number.

Ratio studies are conducted on each of the residential valuation neighborhoods and school districts in El Paso County to judge the two primary aspects of mass appraisal accuracy--level and uniformity of value. The central tendency and dispersion generated from sales ratios are available for each stratified neighborhood within an ISD and summarized by year. These summary statistics including, but not limited to, the weighted mean, median, standard deviation, coefficient of variation, and coefficient of dispersion provide the appraisers a tool by which to determine both the level and uniformity of appraised value on a stratified neighborhood basis. The level of appraised values is determined by the weighted mean for individual properties within a neighborhood, and a comparison of neighborhood weighted means reflect the general level of appraised value between comparable neighborhoods. Review of the standard deviation, coefficient of variation, and coefficient of dispersion discerns appraisal uniformity within and between stratified neighborhoods.

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

whether the value level in a neighborhood needs to be updated in an upcoming reappraisal, or whether the level of market value in a neighborhood is at an acceptable level. (See Attachment B for Appraisal Ratios Sales High and Low, Ratio Studies Summary, Appraisal Ratios by Market Area, Appraisal Ratios by Neighborhoods)

5.3.5 Market Adjustment or Trending Factors

Neighborhood, or market adjustment, factors are developed from appraisal statistics provided from ratio studies and are used to ensure that estimated values are consistent with the market. The CAD's primary approach to the valuation of residential properties uses a hybrid cost-sales comparison approach. This type of approach accounts for neighborhood market influences not specified in the cost model.

The following equation denotes the hybrid model used:

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

Whereas, the market value (MV) equals the land value (LV) plus the replacement cost new (RCN) of any improvements minus normal depreciation (D) times the market adjustment factor (MA). As the cost approach separately estimates both land and building values and uses depreciated replacement costs, which reflect only the supply side of the market, it is expected that adjustments to the cost values are needed to bring the level of appraisal to an acceptable standard. Market or location adjustments are applied uniformly within neighborhoods to account for locational variances between market areas or across a jurisdiction.

If a neighborhood is to be updated, the appraiser uses a cost ratio study that compares recent sales prices of properties appropriately adjusted for the effects of time within a delineated neighborhood with the properties' actual cost value. The calculated ratio derived from the sum of the sold properties' cost value divided by the sum of the sales prices indicates the neighborhood level of value based on the unadjusted cost value for the sold properties. This cost-to-sale ratio is compared to the appraisal-to-sale ratio to determine the market adjustment factor for each neighborhood. This market adjustment factor is needed to trend the values obtained through the cost approach closer to the actual market evidenced by recent sales prices within a given neighborhood. The sales used to determine the market adjustment factor will reflect the market influences and conditions only for the specified neighborhood, thus producing more representative and supportable values. The market adjustment factor calculated for each updated neighborhood is applied uniformly to all properties within a neighborhood.

Monthly time adjustments were developed using the matched sales analysis method. For each school district, sales-to-appraisal ratios based on unadjusted cost values were stratified on a quarterly basis. Statistics produced from the quarterly market data include measures of central tendency (mean and median) that represent the level of appraised values, and measures of uniformity (coefficient of dispersion and coefficient of

variation) that represent the consistency of appraised values within and between strata. The resulting quarterly medians were graphically plotted for examination and analysis. A yearly time adjustment for each market area sample was produced. Analysis was then performed on each school district sample to determine the appropriate yearly time adjustment to be employed, or if a time adjustment was even warranted. Once the market areas yearly time adjustment was determined, a monthly time adjustment was calculated. For this year, no time adjustment was warranted.

Once the market-trend factors are applied, a second set of ratio studies is generated that compares recent sale prices with the proposed appraised values for these sold properties. From this set of ratio studies, the appraiser judges the appraisal level and uniformity in both updated and non-updated neighborhoods, and finally, for the school district as a whole.

5.4 Treatment of Residence Homesteads

Beginning in 1998, the State of Texas implemented a constitutional classification scheme concerning the appraisal of residential property that receives a residence homestead exemption. Under the new law, beginning in the second year a property receives a homestead exemption; increases in the value of that property are "capped." The value for tax purposes of a qualified residence homestead will be the LESSER of:

- the market value; or
- the preceding year's appraised value;
  PLUS 10 percent;
  PLUS the value of any improvements added since the last re-appraisal.

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

In 2009, the Tax Code was changed to address valuation of residential homestead properties. Section 23.01(c) states that: "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.

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".

5.5 Individual Value Review Procedures

5.5.1 Field Review

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

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

5.5.2 Office Review

Given the ample resources and time required to conduct a routine field review of all properties, homogeneous properties consisting of tract housing with a low variance in sales ratios and other properties having a recent field inspection date are value reviewed in the office. Valuation reports comparing previous values against proposed and final values are generated for all residential improved and vacant properties. The dollar amount and percentage of value difference are noted for each property within a delineated neighborhood allowing the appraiser to identify, research and resolve value anomalies before final appraised values are released. Previous values resulting from a protest hearing are individually reviewed to determine if the value remains appropriate for the current year.

Using Pictometry (aerial photography software) allows the staff to view properties and compare them with the appraisal records. If there is no significant change between the record and the aerial view, then staff will indicate that the property was reviewed and not changed. If there is a significant change between the record and the aerial view, then staff will either make the changes in office and indicate that the property was changed

in-house or the staff will indicate that a field check is required. This depends upon the circumstances of each account and is on a case by case basis.

Once the appraiser is satisfied with the level and uniformity of value for each neighborhood within their area of responsibility, the estimates of value are released for Notices of Appraised Value.

5.6 Performance Tests

5.6.1 Sales Ratio Studies

The primary analytical tool used by the appraisers to measure and improve performance is the ratio study. The CAD ensures that the appraised values that it produces meet the standards of accuracy in several ways. Overall sales ratios are generated for each ISD by quarter to allow the appraiser to review general market trends within their area of responsibility, and provide an indication of market appreciation over a specified period of time. The neighborhood descriptive statistic, along with frequency distributions and scatter diagrams are reviewed for each neighborhood being updated for the current tax year. In addition to the mainframe sales ratios by school district and neighborhood, quarterly sales ratios are generated from a PC-based statistical application in PACS. Reported in the sales ratio statistics for each school district is a level of appraisal value and uniformity profile by land use, sales trends by quarter and 12 month time frame, and appraisal value ranges. The PC-based ratio studies are designed to emulate the findings of the state comptroller's annual property value study for category A property. A complete summary is found in Attachment B.

***Figure 5.2** Ratios July 2020, Appraisal Ratios Report by Market Area*

MARKET_AREA		Count	Median	Mean	Wtd. Mean	COV	COD	PRD
A	West Area	348	0.9696	0.9716	0.9574	13.1479	9.5660	1.0148
B	Upper Valley Area	123	0.9868	0.9866	0.9818	12.2379	8.7590	1.0050
C	Northeast Area	342	0.9595	0.9677	0.9634	13.5768	9.4580	1.0045
D	Central Area	69	0.9421	0.9479	0.9280	17.3305	13.4100	1.0215
E	East Area	1126	0.9771	0.9875	0.9820	12.2409	8.7330	1.0056
F	Lower Valley	149	0.9721	1.0106	0.9843	19.9625	12.4740	1.0267
G	Anthony	15	0.9470	0.9788	0.9811	12.8711	10.5560	0.9976
H	Canutillo	26	0.9879	0.9693	0.9801	15.9483	10.3380	0.9890
J	Clint	28	0.9770	0.9878	0.9721	18.3885	11.2310	1.0162
K	Fabens	3	0.9840	0.9501	0.9743	7.7695	4.5890	0.9751
L	San Elizario	21	0.9629	0.9188	0.9243	14.2598	8.6860	0.9940
M	Tornillo	1	0.9410	0.9410	0.9410	0.0000	0.0000	1.0000
N	City of Socorro	35	0.9651	0.9334	0.9163	18.1007	12.4210	1.0187
P	Socorro	153	1.0162	1.0230	1.0163	10.0461	7.1500	1.0066
R	City of Horizon	77	0.9749	0.9840	0.9728	13.3189	10.4820	1.0115
Total		2516	0.9751	0.9833	0.9750	13.3859	9.4140	1.0085

5.6.2 Management Review Process

Once the proposed value estimates are finalized, the Statistical Coordinator reviews the sales ratios by neighborhood and present pertinent valuation data, such as, history of hearing protest, sale-to-parcel ratio, and level of appraisal to the Director of Appraisal Services and the Chief Appraiser for final review and approval. This review includes comparison of levels of value between related neighborhoods within and across jurisdiction lines. The primary objective of this review is to ensure that the proposed values meet or exceed PTAD requirements appropriate for the tax year in question.

Our analysis indicates the following:

- Most neighborhoods are within tolerances. Many outside tolerances will be corrected with adjustments to improvement classification, depreciation and/or land value.

- There are 5 neighborhoods that may need downward market adjustments to be within tolerances. 2 are in the East, while there is one neighborhood each in market area A (West), market area H (Canutillo) and market area P (Socorro).

- There are 22 neighborhoods that may need upward market adjustments to be within tolerances. There are 4 neighborhoods in market area A (West), one neighborhood in market area B (Upper Valley), 3 neighborhoods in market area C (Northeast), 2 neighborhoods in market area D (Central), 8 neighborhoods in market area E (East), one neighborhood in market area F (Lower Valley), one neighborhood in market area H (Canutillo), one neighborhood in market area N (City of Socorro) and one neighborhood in market area P (Socorro).

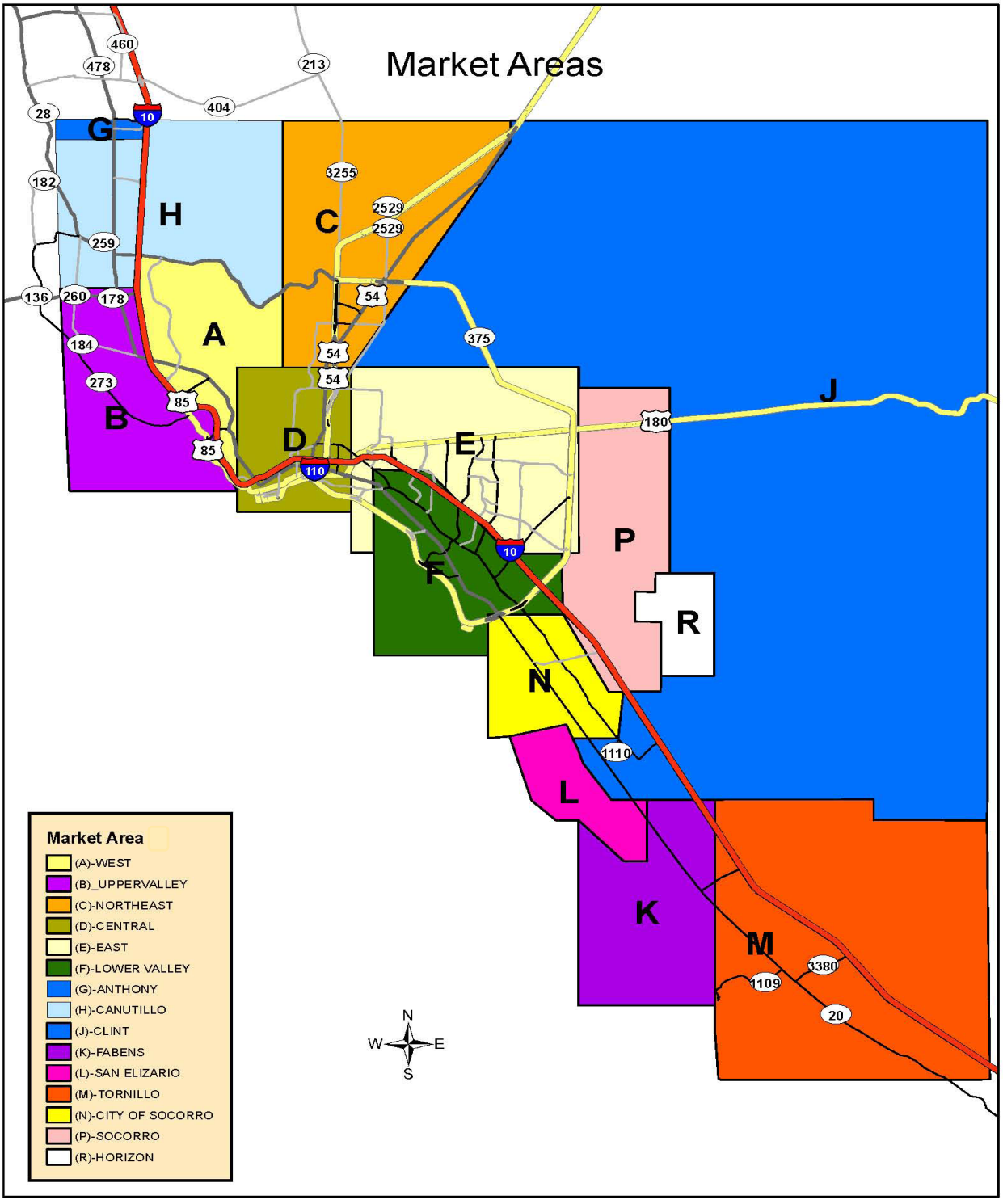
A list of these neighborhoods to be reviewed is found below and in Attachment B. A map of our Market Areas is also below.

Figure 5.3 Neighborhoods to review

Market Area	NBHD	Count	Median	Mean	Wtd. Mean	COD	COV	PRD
A	AC34013300	6	0.9367	0.9245	0.9199	6.4010	8.5422	1.0049
A	AC34013385	9	0.9118	0.9145	0.9087	6.5580	8.6556	1.0064
A	AC34013550	5	0.8920	0.9022	0.8941	5.3180	6.9844	1.0090
A	AF60914700	8	1.0553	1.1007	1.1009	8.7220	12.4740	0.9999
A	AR46014400	12	0.8280	0.8656	0.8614	7.3330	8.4005	1.0050
B	BR57607385	12	0.9079	0.9183	0.9155	4.4230	6.1971	1.0031
C	CD04710220	5	0.8287	0.8441	0.8304	14.9160	21.8885	1.0165
C	CM42510200	15	0.9913	0.9612	0.9281	16.0890	25.2919	1.0356
C	CS81610200	33	0.8456	0.8503	0.8402	9.7220	11.9471	1.0120
D	DA52008220	7	0.8330	0.8581	0.8355	17.8220	20.8204	1.0271
D	DM79408220	8	0.9081	0.9219	0.9242	13.1800	18.2492	0.9976
E	EC51810250	6	0.7968	0.8401	0.8265	10.7360	15.6224	1.0164
E	EP58610400	9	0.8940	0.9019	0.8921	6.6340	8.3576	1.0110
E	ES22511190	8	0.9093	0.9380	0.9020	13.6450	21.6383	1.0399
E	ET28705360	6	0.8690	0.8940	0.8980	4.6210	6.0146	0.9955
E	ET28706360	45	0.8832	0.8807	0.8769	6.4780	10.1933	1.0044
E	ET28710580	12	1.0791	1.0698	1.0624	6.3280	7.9055	1.0070
E	EV89311240	7	0.9249	0.9275	0.8868	11.5150	16.7834	1.0459
E	EV89311300	6	1.0201	1.1128	1.0786	16.6130	27.5815	1.0317
E	EV89314250	10	0.9722	0.9292	0.9201	9.2920	12.1703	1.0099
E	EV92707270	6	0.8906	0.8831	0.8798	7.7260	9.9038	1.0037
F	FV89307280	8	0.8832	0.9114	0.9159	6.6530	7.9977	0.9951
H	HC10217260	5	0.8272	0.8658	0.8614	8.9740	11.0072	1.0051
H	HE85510833	9	1.0445	1.0565	1.0541	5.9760	9.3472	1.0023
N	NJ18710355	9	1.0116	0.9356	0.8956	13.0710	18.9585	1.0446
P	PA51912560	7	0.9382	0.9361	0.9161	7.3980	10.3897	1.0219
P	PT20007600	6	1.0856	1.1081	1.1089	3.9710	5.1731	0.9993

Low ratio. Values need to be raised.
High ratio. Values need to be lowered.

Figure 5.4 Market Areas Map



6.0 COMMERCIAL VALUATION PROCESS

6.1 Introduction

6.1.1 Appraisal Responsibility

This mass appraisal assignment includes all of the commercially classed real property which falls within the responsibility of the commercial valuation appraisers of the El Paso Central Appraisal District and located within the boundaries of this taxing jurisdiction. The Commercial appraisers are responsible for developing equal and uniform market values for commercial real and vacant property accounts. There are approximately 30,118 such accounts in El Paso County.

The CAD's appraisal roll displays and identifies each parcel of real property individually. Commercial appraisers appraise the fee simple interest of properties according to statute. However, the effect of easements, restrictions, encumbrances, leases, contracts or special assessments are considered on an individual basis, as is the appraisal of any non-exempt taxable fractional interests in real property (i.e. certain multi-family housing projects). Fractional interests or partial holdings of real property are appraised as fee simple for the whole property and divided programmatically, whenever possible, based on their prorated interests. Otherwise, separate accounts are created with values reflecting the fractional interest.

6.1.2 Appraisal Resources

- Personnel - The Commercial appraisal staff consists of thirteen (13) appraisers.
- Data - A common set of data characteristics for each commercial property in El Paso County is collected in the field and data entered to the computer.

The improved real property appraisal responsibilities are categorized according to major property types of multi-family or apartment, office, retail, warehouse, light industrial and special use (i.e. hotels, hospitals and, nursing homes). The commercial appraisal staff is multi-task oriented as certain appraisers have multiple responsibilities. Eleven appraisers are assigned to improved commercial property types. One appraiser is assigned to the land valuation responsibilities. Model building and testing is the responsibility of the commercial appraisal staff and/or the Statistical Coordinator. Commercial appraisal staff are responsible for analyzing apartment complexes. The Commercial Manager and Statistical Coordinator are supervised by the Director of Appraisal Services.

Data - The data used by the commercial appraiser includes verified sales of vacant land and improved properties and the pertinent data obtained from each (sales price levels, capitalization rates, income multipliers, equity dividend rates, marketing period, etc.). Other data used by the appraiser includes actual income and expense data (typically obtained through the appeals 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. Pictometry has become an important data collection tool that allows the commercial appraiser to verify measurements and identify physical characteristics of individual parcels.

6.2 Preliminary Analysis

6.2.1 Pilot Study

Pilot studies are used to test new or existing procedures or valuation modifications in a limited area (a sample of properties) of the CAD and are also considered whenever substantial changes are made. These studies, which could include ratio studies where there is sufficient data, reveal whether the system is producing accurate and reliable values or whether procedural modifications are required. The commercial staff appraisers and/or the Statistical Coordinator use this methodology when developing both the cost approach and income approach models.

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

6.3 Valuation Approach (Model Specification)

6.3.1 Area Analysis

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

6.3.2 Neighborhood Analysis

A neighborhood is a geographical area which is defined by physical, economic, political and social boundaries. Analysis of neighborhoods involves identifying properties that are similarly affected by these factors. Along with proper classification of properties, this process furthers the goal of appraisal uniformity and equity in mass appraisal models.

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 organize comparable properties into smaller, manageable subsets of the universe of properties known as

neighborhoods.

6.3.3 Highest and Best Use Analysis

The highest and best use if the most reasonable and probable use that generates the highest value of the real estate as of the date of valuation. The highest and best use of any given property must be physically possible, legally permissible, financially feasible, and derives maximum production. For improved properties, highest and best use is evaluated as improved and as if the site were still vacant. This assists in determining if the existing improvements have a transitional use, interim use, nonconforming use, multiple uses, speculative use, excess land, or a different optimum use if the site were vacant. All land unless specified by the code is as if vacant. For vacant tracts of land within this jurisdiction, the highest and best use is considered speculative based on the surrounding land uses. Improved properties reflect a wide variety of highest and best uses which include, but are not limited to: office, retail, multifamily, industrial, special purpose or interim use. In many instances, the property's current use is the same as its highest and best use. This analysis ensures that an accurate estimate of market value is derived.

6.3.4 Market Analysis

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

6.4 Data Collection / Validation

6.4.1 Data Collection Manuals

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

Data validation is done annually, prior to the equity phase and after the sales have been researched, verified, keyed into the database, and quality control has been completed. The confirmed sales reports are digital files that categorize the sales by property and use type, and sort the data by location and chronological order. Income data is also stored in digital files. These files are available to the public for use during hearings, and are also used by the CAD appraisers during the hearings process. Data is available to the public as a paper copy upon request.

6.4.2 Sources of Data

In terms of commercial sales data, the CAD receives a copy of the deeds recorded in El Paso County that convey commercially classed properties. The deeds involving a change in commercial ownership are entered into the sales information system and researched in an attempt to obtain the pertinent sale information. Other sources of sale data include the hearings process and local, regional and national real estate and financial publications.

For those properties involved in a transfer of commercial ownership, a sale file is produced which begins the research and verification process. The initial step in sales verification involves a computer-generated questionnaire, which is mailed to both parties in the transaction (Grantor and Grantee). If a questionnaire is not returned within thirty days a second questionnaire is mailed. If a questionnaire is answered and returned, the documented responses are recorded into the computerized 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 or others that may have the desired information. Finally, closing statements are often provided during the hearings process. The actual closing statement is the most reliable and preferred method of sales verification.

6.5 Valuation Analysis (Model Calibration)

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

6.5.1 Cost Schedules

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

modifiers are necessary to adjust these base costs specifically for El Paso County. The national cost service provides 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 20, 25, 30, 35, 40, 45, 50, 55, 60, 65, and 70 year expected life. These schedules are then tested to ensure they are reflective of current market conditions. The actual and effective ages of improvements are noted in CAMA. Effective age estimates are based on the utility of the improvements relative to where the improvement lies on the scale of its total economic life and its competitive position in the marketplace. Effective age estimates are based on quality of construction, types of amenities, and quality of maintenance.

Market adjustment factors such as external and/or functional obsolescence can be applied if warranted. A depreciation calculation override can be used if the condition or effective age of a property varies from the norm by appropriately noting the physical condition and functional utility ratings on the property data characteristics. These adjustments are typically applied to a specific property type or location and can be developed via ratio studies or other market analyses. Accuracy in the development of the cost schedules, condition ratings and depreciation schedules will usually minimize the necessity of this type of an adjustment factor.

6.5.2 Income Models

The income approach to value is applied to those real properties typically considered by market participants as income-producing and for which the income approach is considered the leading value indicator. Typically, commercial properties will be analyzed under 6.3.2 and 6.3.3 prior to application of income models.

The income approach requires analysis of income data from property owners and market comparables to arrive at an appropriate rent, vacancy, and expense ratio for use in the following formula:
Net Operating Income = (Potential Gross Rent - Vacancy Allowance) X (1-Expense Ratio)
The NOI is then applied in the formula:
Value = NOI / Cap Rate

There are several methods for deriving cap rates and each involves in-depth analysis of the market and its participants. The CAD contracted an MAI appraiser to conduct analysis of pertinent commercial cap rates for tax year 2019. The cap rates applied to the income models were within the limits of the analysis.

6.5.3 Sales Comparison (Market) Approach

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

For improved commercial properties, the most common approaches used are the income approach and the cost approach due to a limited pool of sales data. However, the commercial land tables are built from sales. Neighborhood, zoning, size, frontage, and influence are some delineating factors. Paired sales analysis is used in deriving any time adjustments.

6.5.4 Final Valuation Schedules

Based on the market data analysis and review discussed previously in the cost, income and sales approaches, the cost and income models are calibrated and finalized. The calibration results are keyed to the schedules and models on the mainframe CAMA system for utilization on all commercial properties in the CAD. The schedules and models are summarized in the Commercial Department Appraisal Manual. This manual is provided to appraisers and is made available to the public in an easy to understand format.

6.5.5 Statistical Analysis

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

Appraisal statistics of central tendency and dispersion generated from sales ratios are available for most property types. The summary statistics provide the appraisers or statistical analyst a 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 median/weighted mean for individual properties within a specific type, and a comparison

of median/ 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.

Potential gross rent estimates, occupancy levels, secondary income, allowable expenses (inclusive of non-recoverable expenses and replacement reserves), net operating income and 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.

6.6 Individual Value Review Procedures

6.6.1 Field Review

The date of last inspection, extent of that inspection, and the commercial CAD appraiser responsible are listed in the CAMA system. A field review may include a review using Pictometry. If a property owner disputes the CAD's records concerning this data in a protest hearing, CAMA may be altered based on the credibility of the evidence provided. Typically, a new field check is then requested to verify this evidence for the current year's valuation or for the next year's valuation. In addition, if a building permit is filed for a particular property indicating a change in characteristics, that property is added to a work file. Finally, even though every property cannot be inspected each year, each appraiser typically designates certain segments of their area of responsibility to conduct field checks.

Commercial appraisers are somewhat limited in the time available to field review all commercial properties of a specific use type. A major effort is made by appraisers to field review as many properties as possible or economic areas experiencing large numbers of remodels, renovations, or retrofits, changes in occupancy levels or rental rates, new leasing activity, new construction, or wide variations in sale prices. Additionally, the appraisers frequently field review subjective data items such as quality of construction and physical, functional and economic obsolescence factors contributing significantly to the market value of the property. In some cases field reviews are warranted when sharp changes in occupancy or rental rate levels occur between building classes or between economic areas. With preliminary estimates of value in these targeted areas, the appraisers test computer assisted values against their own appraisal judgment. While in the field, the appraisers physically inspect sold and unsold properties for comparability and consistency of values. Oblique and ortho photos via Pictometry are also used when available.

6.6.2 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 Department Appraisal Manual. The Commercial Manual is

updated annually.

Office reviews are typically limited by the data presented in final value reports. These reports summarize the pertinent data of each property as well as comparing the previous values (two year value history) to the proposed value conclusions of the various approaches to value. These reports show proposed percentage value changes, income model attributes or overrides, economic factor (cost overrides) and special factors affecting the property valuation such as new construction status, prior year litigation and a three years sales history (USPAP property history requirement for non-residential property).

The appraiser may review methodology for appropriateness to ascertain that it was completed in accordance with USPAP or more stringent statutory and CAD policies. Previous values resulting from protest hearings are individually reviewed to determine if the value remains appropriate for the current year based on market conditions. Each appraiser's review is limited to properties in their area of responsibility by property type (improved) or geographic area (commercial vacant land).

Once the appraiser is satisfied with the level and uniformity of value for each commercial property within their area of responsibility, the estimates of value go to noticing. Each parcel is subjected to the value parameters appropriate for its use type. If one of the parcel's component values, land value, improvement value or total value exceeds the permissible change in value range it fails the value edits. In this case, the parcel does not shift to noticing, but it is placed on a rework list. Therefore, although the value estimates are determined in a computerized mass appraisal environment, value edits and rework lists enable an individual parcel review of value anomalies before the estimate of value is released for noticing.

6.7 Performance Tests

The appraisers utilize desktop applications such as MS ACCESS and EXCEL programs to evaluate subsets of data by economic area or a specific and unique data item. On the desktop, this may be customized and performed by building class and age basis.

6.7.1 Comparative Appraisal Analysis

The commercial appraiser performs an average unit value comparison. These studies are performed on commercially classed properties by property use type (such as apartment, office, retail and warehouse usage or special use). The objective to this evaluation is to determine appraisal performance of sold and unsold properties. Appraisers average the unit sales amounts and unit appraised values for the same parcels creating a comparison of average value changes of sold and unsold properties, when available. These studies are conducted on substrata such as building class and on properties located within various economic areas. In this way overall appraisal performance is evaluated geographically by specific property type to discern whether sold parcels have been selectively appraised. When sold parcels and unsold parcels are appraised equally, the average unit values are similar. These horizontal equity studies are performed prior to annual noticing.

7.0 INDUSTRIAL VALUATION PROCESS

7.1 Introduction

7.1.1 Appraisal Responsibility

The industrial appraisers and/or contract appraisers of the El Paso Central Appraisal District are responsible for developing fair, uniform market values for industrial properties. The industrial contract appraiser is also responsible for the valuation of all tangible general industrial business personal property in El Paso County. There are approximately 607 parcels of industrial real property and business personal property accounts in El Paso County of which approximately 366 are personal property.

Wardlaw Appraisal Group appraises approximately 718 parcels of industrial real and personal properties and utilities. The Wardlaw Appraisal Group Mass Appraisal Report is included in Attachment C.

7.1.2 Appraisal Resources

- **Personnel** – The El Paso CAD contracts with the Wardlaw Appraisal Group. Appraisal firm to value properties for which the CAD does not have the available personnel or resources. See attached Mass Appraisal summary submitted by Wardlaw Appraisal Group
- **Data** – The contract appraisal staff inspects their assigned properties to obtain information about buildings, site improvements, process and shop equipment, and various items of business personal property. The individual characteristics of the property being appraised are the primary factors that drive the appraised value.

7.2 Valuation Approach (Model Specification)

7.2.1 Area Analysis

See Attached Mass Appraisal Summary submitted by Wardlaw Appraisal Group. 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.

7.2.2 Neighborhood Analysis

Neighborhood analysis of the type of properties valued by the industrial appraiser is not meaningful. Industrial properties do not have the type of generic “sameness” that is appropriate for neighborhood models.

7.2.3 Highest and Best Use Analysis

The highest and best use of real or business personal property is the most reasonable and probable use of the property on the date of appraisal that is physically possible, financially feasible, legally permissible, and that derives maximum production from the property. Usually, the current use of the property is the highest and best use of that property. Industrial facilities are most commonly located in areas that support industrial use. In areas where mixed use does occur, the highest and best use of the property is examined by the appraiser to estimate the effect of this factor.

7.2.4 Market Analysis

Market analysis is the basis for finalizing value estimates on properties for which the industrial appraiser has responsibility. Even though many industrial properties are unique in nature, the market for this type property is analyzed to see how the values of similar or similar as possible properties are affected by market forces. Industrial properties, such as machine shops, have many similar facilities that can be compared to the subject property in terms of 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. However, some facilities, such as specialty chemical plants, are so unique in nature that the appraiser must use the closest available plant in terms of output quantity, type of product manufactured, and other factors to estimate the value of the subject property. Many industrial properties use the same type of building and, depending on the type of business, may use the same type of manufacturing or service equipment. However, the manner in which the entire business operation is put together makes that particular facility unique. The CAD uses information from similar businesses to examine the real and business personal property values at a particular business, but the individual characteristics of the business being reviewed determine the value estimation. 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 type structures can be used to estimate values at facilities that have similarly constructed buildings. The building as constructed will have differences that must be taken into account when estimating the final value of the property being reviewed.

A similar analysis is used for business personal property. Many items of business personal property, 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 where used, and level of care will have an effect on the final value estimation. When cost data for this type property is available and considered

reliable, it is used for value estimation purposes at other plant facilities. On-site inspection and information provided by the property owner will affect the final value.

7.3 Data Collection/Validation

7.3.1 Data Collection Manuals

An extended range of variations may exist within the same class of industrial property, and there are a multitude of property types within the industrial category. For this reason, effective data collection procedures would be very difficult to organize in a single comprehensive manual. Industrial business personal property also consists of many different classes of assets with a wide range of variation within each class.

7.3.2 Sources of Data

The original real and business personal property data used by El Paso CAD was supplied to the contract appraisers. Since that time, the contract appraisal personnel have updated that information based on field review. As new facilities are built, the contract appraisal personnel collect all the real and business personal property data necessary to value the property initially and thereafter update the information when the property is again visited. The CAD receives building permit information from the cities and from the county when a facility is being built outside an incorporated city.

7.3.3 Data Collection Procedures

The contract appraisal personnel annually or periodically visit assigned plants. 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 over a period two or more years.

The appraisers take with them the historical data on the buildings and site improvements and the previous listing of business personal property at the facility being visited. Changes to the existing structures and business personal property are noted and that information is used for value estimation purposes. If cost information for the real or business personal property is supplied later, the field data can be compared to that information to judge the accuracy of the information.

7.4 Valuation Analysis (Model Calibration)

7.4.1 Final Valuation Schedules

See Mass Appraisal Summary submitted by Wardlaw Appraisal Group.

7.5 Individual Value Review Procedures

7.5.1 Field Review

The CAD's personnel periodically review their assigned real and business personal property accounts where there is evidence of change at a particular facility and when there is not, these accounts are revisited on a two to three-year cycle. Certain properties are reviewed annually because past experience shows that changes are occurring continually in the real or business personal property at that facility. Properties assigned to contract appraisal firms are reviewed annually because changes also occur regularly at these facilities.

The results of prior year hearings and indications of building permits being issued are another source of required field visits. Many times during hearings, issues are presented that cause a value adjustment. Those issues must be field checked to see if these influences will be on going and warrant permanent value adjustment or are transitory and permanent adjustment is not warranted. This information needs to be recorded so the appraiser will be better able to estimate the property value. Building permits must be field checked to see what affect these have on existing structures. Any new construction is noted and the information necessary to value the structure is recorded. Additionally, any structure demolition is noted so the improvement value can be adjusted accordingly.

Part of the field review includes noting any land characteristics that would affect the land value. The CAD values all land for the properties within its jurisdiction, including those properties assigned to contract appraisal firms. The contract appraisal firms must advise the CAD of any characteristics that would affect the value of the land associated with that assigned facility.

7.5.2 Office Review

All properties not subjected to field review are reviewed in the office by the CAD appraiser assigned to particular real or personal properties. The office review relies on historical information in the real or business personal property file as the basis for deciding on the estimated 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 comparable properties at different locations, helps the appraiser decide the estimated value to be placed on the subject improvements.

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

7.6 Performance Tests

7.6.1 Sales Ratio Studies

Ratio studies are an important tool to examine how close appraised values are to market values. The ratio study may use available sales data or may use independent, expert appraisals. Typically, there are not enough sales of industrial properties to show representativeness of that class of property in a ratio study. Ratio studies of industrial properties usually have to rely on independent appraisals as an indicator of market values.

7.6.2 Comparative Appraisal Analysis

This type of analysis is usually not done on industrial properties due to the unique nature of the property and also because of time and budget constraints regarding available appraisal staff. Only in an instance where a jurisdiction would file a jurisdiction challenge with the Appraisal Review Board would the CAD perform such an analysis.

If a jurisdiction challenge is received by El Paso CAD on an industrial category of properties, the contract appraisers assigned to those accounts will research the appraisal roll to see what other similar properties exist. 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. In like manner, the business personal property values can be compared per category, such as furniture and fixtures, machinery and equipment, etc., but the same comparison of the type of and use of the property must be examined to ensure proper comparison.

8.0 BUSINESS PERSONAL PROPERTY

8.1 Introduction

8.1.1 Appraisal Responsibility

There are four different business personal property types appraised by the CAD's business personal property section: Business personal property accounts; Leased Assets; Vehicles; and Multi-Location Assets. There are approximately 26,089 business personal property accounts in El Paso County. The CAD has contracted with Wardlaw Appraisal Group to appraise industrial L2 accounts (reported under Section 7) and the CAD appraises the remaining accounts. In addition, CAD processes approximately 666 valuations on special inventories such as motor vehicle dealers' inventory, heavy equipment inventory, manufactured home dealer inventory and trailer and vessel dealer inventory under category S and 51 tangible non-business vehicles.

8.1.2 Appraisal Resources

- Personnel - The business personal property appraisal staff consists of nine (9) appraisers, one (1) field specialists, three (3) support staff.

- Data - A common set of data characteristics for each business personal property account in El Paso County is collected in the field and data entered to the CAD's computer. The property characteristic data drives the computer-assisted business personal property appraisal (CAPPA) system. The business personal property appraisers collect the field data.

8.2 Valuation Approach (Model Specification)

8.2.1 SIC Code Analysis

Four digit numeric codes, called Standard Industrial Classification (SIC) codes that were developed by the federal government are used by CAD as a way to classify business personal property by business type uses.

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

8.2.2 Highest and Best Use Analysis

The highest and best use of property is the reasonable and probable use that supports the highest present value as of the date of the appraisal. The highest and best use must be is physically possible, financially feasible, legally permissible, and that derives maximum production from the property. The highest and best use of business personal property is normally its current use.

8.3 Data Collection/Validation

8.3.1 Data Collection Procedures

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

8.3.2 Sources of Data

8.3.2.1 Business personal property

The CAD's property characteristic data is collected through a massive field data collection effort coordinated by the CAD each year. When revaluation activities permit, CAD appraisers collect new data via the annual field drive-out. This project results in the discovery of new businesses not revealed through other sources. Various discovery publications such as The El Paso, Inc. and city permits are also used to discover business personal property. Tax assessors, city and local newspapers, and the public often provide the CAD information regarding new business personal property and other useful facts related to property valuation.

8.3.2.2 Vehicles

The CAD obtains a listing of vehicles from the Texas Department of Transportation (TXDOT) Title and Registration Division records. Other sources of data include property owner renditions and field inspections.

8.3.2.3 Leased and Multi-Location Assets

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

8.4 Valuation and Statistical Analysis (Model Calibration)

8.4.1 Cost Schedules

Cost schedules are developed by SIC code by CAD business personal property valuation appraisers. Cost schedules are developed by analyzing cost data from property owner renditions, hearings, state schedules, and published cost guides. The cost schedules are reviewed as necessary to conform to changing market

conditions. The schedules are typically in a price per square foot format, but some exception SIC codes are in an alternate price per unit format, such as per room for hotels.

8.4.2 Statistical Analysis

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

8.4.3 Depreciation Schedule and Trending Factors:

8.4.3.1 Business personal property

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

PVF = INDEX FACTOR x PERCENT GOOD FACTOR

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

MARKET VALUE ESTIMATE = PVF x HISTORICAL COST

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

8.4.4 Comptroller's Field Appraiser's Guide

This guide was developed by the Property Tax Division of the State Comptroller's Office. It consists of quality/density schedules and depreciation tables for specific SIC properties. These schedules are adjusted to local conditions by the appraisal staff.

The Guide is used in the general business personal property valuation program to estimate the value of new accounts for which no information has been provided at the time of field inspection or when valuing a national chain business or a business not given as a comparable.

8.4.5 Vehicles

Value estimates for vehicles are based on NADA published book values or using PVF schedules or published guides.

8.4.6 Leased and Multi-Location Assets

Leased and multi-location assets are valued using the PVF schedules mentioned above. If the asset to be valued in this category is a vehicle, then NADA or Blue Book published book values may be used in lieu of the PVF schedule. An appraiser using PVF schedules or published guides values assets where cost is not listed by the vendor.

8.5 Individual Value Review Procedures

8.5.1 Office Review

8.5.1.1 Business Personal Property

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

8.5.1.2 Vehicles

A vehicle master file is received on tape from an outside vendor (TXDOT) and vehicles in the CAD's system are matched to current TXDOT records. The vehicles are sorted by owner name, business name or location address and then matched to CAD business personal property records. An appraiser uses PVF schedules or published guides to value vehicles that are not listed on the TXDOT records.

8.5.1.3 Leased and Multi-Location Assets

Leasing and multi-location accounts that have a high volume of vehicles or other assets may be loaded programmatically if reported by the property owner electronically, Electronic renditions, often require reformatting before they can be loaded to the account. Accounts that render by hard copy are entered by CAD staff.

8.6 Performance Tests

8.6.1 Ratio Studies

Every other year the Property Tax Assistance Division of the state comptroller's office conducts a property value study (PVS). The PVS is a ratio study used to gauge appraisal CAD performance. Results from the PVS play a part in school funding. Rather than a sales ratio study, the business personal property PVS is a ratio study using state cost and depreciation schedules to develop comparative business personal property

values. These values are then compared to El Paso CAD's business personal property values and ratios are formed.

8.6.2 Internal Testing

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

9.0 LIMITING CONDITIONS

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

1. The appraisals were prepared exclusively for ad valorem tax purposes.
2. The property characteristic data upon which the appraisals are based is assumed to be correct. Exterior inspections of the property appraised were performed as staff resources and time allowed.
3. Validation of sales transactions was attempted through questionnaires to buyer and seller, telephone survey and field review. In the absence of such confirmation, residential and commercial sales data obtained from vendors was considered reliable.
4. Attached is a list of staff providing significant mass appraisal assistance to the person signing this certification.
5. Attached are the CAD's latest ratio study results.

10.0 CERTIFICATION STATEMENT

"I, Dinah L. Kilgore, Chief Appraiser for the El Paso Central Appraisal District, solemnly swear that I have made or caused to be made a diligent inquiry to ascertain all property in the CAD subject to appraisal by me, and that I have included in the records all property that I am aware of at an appraised value which, to the best of my knowledge and belief, was determined as required by law."

Dinah L. Kilgore, R.P.A.
Executive Director/Chief Appraiser

Attachment A- TDLR DESIGNATION & NUMBER

TDLR#	Registrant's Name	Field	DES
74872	BEAR, MONICA C	Appraiser	RPA
76432	BEDARD, KAYLA MARIE	Appraiser	
73671	CARNERA, JESSICA	Appraiser	RPA
76431	CASTRO, DENISE	Appraiser	
71871	CENICEROS, HAYDEE	Appraiser	RPA
70440	CERVANTES, MICHAEL	Appraiser	RPA
75157	CORDERO, JUAN JOSE	Appraiser	
64848	CORDOVA, ANA M	Appraiser	RPA
72370	DAVALOS, MARIBEL MENDOZA	Appraiser	RPA
76350	DE SANTIAGO, ADRIAN	Appraiser	
66488	DUENAS, ELIZABETH ANN	Appraiser	RPA
76349	DURAN, PATRICK	Appraiser	
75267	DURAN-GONZALEZ, ALEJANDRA BERENICE	Appraiser	RPA
75268	ESCORZA, ALEJANDRA IRENE	Appraiser	
76348	ESTRADA, ALEX DANIEL	Appraiser	
71619	FERNANDEZ, MELISSA RENEE	Appraiser	RPA
72369	GARCIA, JORGE	Appraiser	RPA
74070	GONZALEZ, ALFRED P	Appraiser	RPA
73474	GUTIERREZ, EZMERALDA	Appraiser	RPA
74631	GUTIERREZ, MARTA I	Appraiser	RPA
67879	GUZMAN, FELIPE D	Appraiser	RPA
75984	HERNANDEZ, LORENZO A	Appraiser	
75266	HURD, CAMERON SKJELSTAD	Appraiser	RPA
73667	MARTINEZ, PERLA	Appraiser	RPA
72780	MEDINA, BEATRIZ	Appraiser	RPA
66290	OSBURN, IMELDA M	Appraiser	RPA
72371	PROVIDENCE, ERIKA KATRICE	Appraiser	RPA
73112	QUIJAS, NANCY CASILLAS	Appraiser	RPA
72781	RAMIREZ, ANGELICA	Appraiser	RPA
73669	READ, ANDREW RICHARD	Appraiser	RPA
73888	RINCON, LIZETT	Appraiser	RPA
71148	ROSAS, REUBEN PEREZ	Appraiser	RPA
76430	SAENZ, OLIVIA	Appraiser	
74478	SALDIVAR, ERIC	Appraiser	RPA
75486	SALGADO, MARINA	Appraiser	
73345	SALINAS, SANDRA ONTIVEROS	Appraiser	RPA
73084	SANCHEZ, ESTHER	Appraiser	RPA
63655	SANCHEZ, EVANGELINA	Appraiser	RPA
66631	SANCHEZ, MARTHA	Appraiser	
71870	SCHAFER, RICHARD P	Appraiser	RPA
75158	SIFUENTES, NORMA ALICIA	Appraiser	
75154	SOLIS, LAUREN ELISE	Appraiser	RPA
76347	VALDEZ, MARCO ANTONIO	Appraiser	
71377	VARGAS, ESPIRIDION M	Appraiser	RPA
72372	VIELMA, VILMA EMMA	Appraiser	RPA
75993	WOODS, WESLEY O'NEAL	Appraiser	

Attachment A- TDLR DESIGNATION & NUMBER
Managers and Administrative Staff

TDLR#	Registrant's Name	Field	DES
63656	APODACA, ANGELINA	Appraiser	RPA
72356	DELGADO, RICHARD ANTHONY	Appraiser	RPA
68886	GONZALEZ, GUILLERMO REYNALDO	Appraiser	RPA
61755	KILGORE, DINAH L	Appraiser	RPA
69288	LOPEZ, LETICIA	Appraiser	RPA
73972	MARTINEZ, DAVID	Appraiser	RPA
70747	MARTINEZ, MICHELLE RAE	Appraiser	RPA
66487	MEDINA, RICKIE ALLAN	Appraiser	RPA
16147	MOLINA, JESUS ALBERTO	Appraiser	RPA
68231	PEREZ, EDUARDO	Appraiser	RPA
71621	PICKETT, CHRISTAL LYNN	Appraiser	RPA
16404	REYES, ANA M	Appraiser	RPA
74069	RODRIGUEZ, JORGE	Appraiser	RPA
67995	STONE, DAVID LEE	Appraiser	RPA
69433	SWEENEY, OCTAVIUS	Appraiser	RPA
68221	THOMPSON, JAMES EDWARD	Appraiser	RPA
72783	WRIGHT, ARIK MARTIN	Appraiser	RPA
75010	ZHANG, YI	Appraiser	RPA

Attachment B: Ratio Studies

Single Family Market Area Ratios
July 2020

MARKET_AREA		Count	Median	Mean	Wtd. Mean	COV	COD	PRD
A	West Area	348	0.9696	0.9716	0.9574	13.1479	9.5660	1.0148
B	Upper Valley Area	123	0.9868	0.9866	0.9818	12.2379	8.7590	1.0050
C	Northeast Area	342	0.9595	0.9677	0.9634	13.5768	9.4580	1.0045
D	Central Area	69	0.9421	0.9479	0.9280	17.3305	13.4100	1.0215
E	East Area	1126	0.9771	0.9875	0.9820	12.2409	8.7330	1.0056
F	Lower Valley	149	0.9721	1.0106	0.9843	19.9625	12.4740	1.0267
G	Anthony	15	0.9470	0.9788	0.9811	12.8711	10.5560	0.9976
H	Canutillo	26	0.9879	0.9693	0.9801	15.9483	10.3380	0.9890
J	Clint	28	0.9770	0.9878	0.9721	18.3885	11.2310	1.0162
K	Fabens	3	0.9840	0.9501	0.9743	7.7695	4.5890	0.9751
L	San Elizario	21	0.9629	0.9188	0.9243	14.2598	8.6860	0.9940
M	Tornillo	1	0.9410	0.9410	0.9410	0.0000	0.0000	1.0000
N	City of Socorro	35	0.9651	0.9334	0.9163	18.1007	12.4210	1.0187
P	Socorro	153	1.0162	1.0230	1.0163	10.0461	7.1500	1.0066
R	City of Horizon	77	0.9749	0.9840	0.9728	13.3189	10.4820	1.0115
Total		2516	0.9751	0.9833	0.9750	13.3859	9.4140	1.0085

Single Family Neighborhoods To Review

Market Area	NBHD	Count	Median	Mean	Wtd. Mean	COD	COV	PRD
A	AC34013300	6	0.9367	0.9245	0.9199	6.4010	8.5422	1.0049
A	AC34013385	9	0.9118	0.9145	0.9087	6.5580	8.6556	1.0064
A	AC34013550	5	0.8920	0.9022	0.8941	5.3180	6.9844	1.0090
A	AF60914700	8	1.0553	1.1007	1.1009	8.7220	12.4740	0.9999
A	AR46014400	12	0.8280	0.8656	0.8614	7.3330	8.4005	1.0050
B	BR57607385	12	0.9079	0.9183	0.9155	4.4230	6.1971	1.0031
C	CD04710220	5	0.8287	0.8441	0.8304	14.9160	21.8885	1.0165
C	CM42510200	15	0.9913	0.9612	0.9281	16.0890	25.2919	1.0356
C	CS81610200	33	0.8456	0.8503	0.8402	9.7220	11.9471	1.0120
D	DA52008220	7	0.8330	0.8581	0.8355	17.8220	20.8204	1.0271
D	DM79408220	8	0.9081	0.9219	0.9242	13.1800	18.2492	0.9976
E	EC51810250	6	0.7968	0.8401	0.8265	10.7360	15.6224	1.0164
E	EP58610400	9	0.8940	0.9019	0.8921	6.6340	8.3576	1.0110
E	ES22511190	8	0.9093	0.9380	0.9020	13.6450	21.6383	1.0399
E	ET28705360	6	0.8690	0.8940	0.8980	4.6210	6.0146	0.9955
E	ET28706360	45	0.8832	0.8807	0.8769	6.4780	10.1933	1.0044
E	ET28710580	12	1.0791	1.0698	1.0624	6.3280	7.9055	1.0070
E	EV89311240	7	0.9249	0.9275	0.8868	11.5150	16.7834	1.0459
E	EV89311300	6	1.0201	1.1128	1.0786	16.6130	27.5815	1.0317
E	EV89314250	10	0.9722	0.9292	0.9201	9.2920	12.1703	1.0099
E	EV92707270	6	0.8906	0.8831	0.8798	7.7260	9.9038	1.0037
F	FV89307280	8	0.8832	0.9114	0.9159	6.6530	7.9977	0.9951
H	HC10217260	5	0.8272	0.8658	0.8614	8.9740	11.0072	1.0051
H	HE85510833	9	1.0445	1.0565	1.0541	5.9760	9.3472	1.0023
N	NJ18710355	9	1.0116	0.9356	0.8956	13.0710	18.9585	1.0446
P	PA51912560	7	0.9382	0.9361	0.9161	7.3980	10.3897	1.0219
P	PT20007600	6	1.0856	1.1081	1.1089	3.9710	5.1731	0.9993

Low ratio. Values need to be raised.
High ratio. Values need to be lowered.

Single Family Improved Properties By School District
Sales Dates From 01/01/2019 To 07/01/2020

ISD	Count	Median	Mean	Wtd. Mean	COD	COV	PRD
ALL ISDs	2516	0.9751	0.9833	0.9750	9.4140	13.4292	1.0085
ANTHONY ISD							
ALL CLASSESS	15	0.9470	0.9788	0.9811	10.5560	12.8711	0.9976
CANUTILLO ISD							
ALL CLASSES	164	0.9957	0.9954	0.9956	7.9510	11.4543	0.9998
CLINT							
ALL CLASSES	94	0.9738	0.9829	0.9707	10.8810	15.2259	1.0126
EL PASO ISD							
ALL CLASSES	664	0.9598	0.9633	0.9515	10.4400	14.3717	1.0123
FABENS ISD							
ALL CLASSES	3	0.9840	0.9501	0.9743	4.5890	7.7695	0.9751
SAN ELIZARIO ISD							
ALL CLASSES	21	0.9629	0.9188	0.9243	8.6860	14.2598	0.9940
SOCORRO ISD							
ALL CLASSES	1184	0.9823	0.9926	0.9903	8.1320	11.1091	1.0024
TORNILLO ISD							
ALL CLASSES	1	0.9410	0.9410	0.9410	0.0000	0.0000	1.0000
YSLETA ISD							
ALL CLASSES	370	0.9636	0.9881	0.9633	11.7880	18.2362	1.0257

Attachment C

WARDLAW APPRAISAL GROUP
EL PASO CAD

2020 Mass Appraisal Report

Contract Valuation Support

Appraisal Responsibility

Wardlaw Appraisal Group, LC (Wardlaw) provides complex property appraisal support services for the El Paso Central Appraisal District (CAD). The complex properties Wardlaw appraises are generally referred to as utility, industrial, commercial and real properties and fall under the F, G, J, and L Categories. El Paso Central Appraisal District contracts with Wardlaw to appraise properties where they lack the in-house expertise to appraise these complex properties. Under the contracts, Wardlaw acts as an agent of the CAD and provides many of the appraisal and support services required under the Texas Property Tax Code and the Uniform Standard of Professional Appraisal Practices (USPAP). This document details the reappraisal practices that Wardlaw performs on behalf of the client CADs and is intended to be incorporated by the CADs into their own Reappraisal Plan.

Appraisal Calendar

Wardlaw adheres to the property tax calendar as established by the State of Texas Property Tax Code. The Wardlaw appraisal calendar generally follows this schedule:

November – April:	Field Inspections of Properties
January 1:	Beginning of the Tax Year
Prior to January 31:	Rendition Request Letters mailed
January 31:	Last day for receipt of 25.25 protests from prior year
April 1st or 30th:	Renditions due (Regulated Companies; April 30th)
Around May 1:	Mail Notices of Appraised Value
May 1:	Begin Equalization Process. Work with property owners to explain appraisals and work on formal and informal protests
Around June 1:	Mail Notices of Appraised Value for properties with an Extension
Late June – Early July:	ARB Hearings
Mid-July:	Deliver totals and Certified Rolls to CADs
August – November:	Process Property Supplements, Additions and Deletions
November:	Begin Field Appraisals for coming Tax Year

Equalization Period

Preliminary values established by the 25.19 Notices of Appraised Value are subject to change during the equalization period. These changes can be initiated by property owner formal or informal protests. The changes can also be initiated by Wardlaw if new information regarding a property becomes available. Formal and informal protests on the mineral, utility, industrial, commercial and real properties are handled directly by Wardlaw, within the appropriate timetables established by the Property Tax Code. Wardlaw attempts to contact protesting taxpayers so that we can;

1) Provide the taxpayer an opportunity to explain the reason for their protest

2) Explain the appraisal methodology and appraisal parameters used on each protested property

3) Consider whether the preliminary appraisal should be adjusted in light of taxpayer evidence

4) Provide settlement and withdrawal paperwork to the taxpayer if appropriate

Wardlaw directly responds to taxpayer requests for appraisal information and supporting appraisal documentation by providing the requested information in a timely manner. Wardlaw then goes on to represent the CAD before the Appraisal Review Board (ARB) to justify appraised values for all protested properties that fall under the mineral, utility, industrial, commercial and real contract.

Documentary evidence of formal and informal changes is then provided to the CAD and ARB in the form of Withdrawal of Protest Settlement waivers on formally protested accounts. The final values are then delivered for certification.

Utility, Industrial & Commercial Property Valuation Process

Appraisal Responsibility

Utility, Industrial and Commercial properties are the tangible assets of various businesses including electric production, transmission, and distribution companies, railroads, petroleum product gathering and delivery pipelines, telephone and communication providers and others. Utility properties are identified in the Texas Property Tax Code as Category J property. Industrial properties are identified under the Texas Property Tax Codes as categories L2 (Industrial, Personal), F2 (Industrial, Real) and L1 (Commercial). The valuation of these properties is considered to be complex due to the involvement of both tangible and intangible property elements that comprise these businesses and due to the size of some of the utilities that are regional and national companies. The appraisal of these companies becomes complex when considering the valuation of the property as a unit in place, evaluating the property by the approaches to value at the company level. The appraisal district does not have personnel qualified to perform this type of appraisal. An appraisal firm is employed to provide the expertise to perform this type of appraisal. Once the estimated value of the unit is

determined by the appraisal firm, that estimated market value is allocated based on the tangible property assets that are located within each CAD.

Appraisal Resources

Personnel – The appraisal firm provides adequate personnel to perform the appraisals.

Data - A common set of data characteristics for each utility, industrial and commercial property account in each CAD is collected from the various government regulatory agency records, field inspections, data resources, and property owner renditions. This data is entered to the appraisal firm's computer. Individual company financial information is gathered through industry specific governmental filings such as Federal Energy Regulatory Commission Reports, Securities and Exchange Commission 10-k filings, Railroad Commission and Public Utility Commission publications. Other company information is gathered from annual reports, internal appraisals, and other in-house and industry publications. Property owner renditions are requested in order to document and list property owned and located in our particular jurisdictions (ie: track mileage, number of meters, pipeline size and mileage, substation and transmission capacity, etc.). The property characteristic data drives the computer-assisted appraisal of the property.

The appraisal of utility and industrial property utilizes three-approach analysis to form an opinion of value for the property. Financial and capital market information is pertinent to understanding factors affecting valuation of complex property. It is necessary to gather financial data to attempt understanding investor and corporate attitudes for capital return expectations and to give consideration to return components such as current interest rates, capital debt structure, bond market rates, and capital supply and demand trends. These financial factors result in overall return rates and capital structure for these companies and affects capitalization rates. The weighted average cost of capital is the most commonly used method of estimating capitalization rates for utility properties. Capitalization rates are estimated using capital return expectations from various publications: Duff & Phelps Valuation Handbook, Wall Street Journal, Mergent Bond Record, Moody's Corporate Bond Yield Averages, S & P Capital IQ. Industry specific information is also gathered from web sites, publications, periodicals, and reference manuals. The appraisal firm then estimates the capitalization rate for utility appraisal under the income approach.

VALUATION AND STATISTICAL ANALYSIS (model calibration)

Approaches to Valuation, Reconciliation

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

Value Review Procedures

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

Ratio studies are also a method of review for relevance of appraisal valuation to market value. Again, in the absence of full disclosure of prices paid and without the abstraction of prices paid for the tangible asset components from recent utility property acquisitions or sales, market based analysis and review is not possible. Ratio studies for utility property must rely on a comparison of one appraisal opinion as the basis for the reasonable property valuation with the district's appraised value to determine the ratio for level and uniformity of appraisal. The PTAD conducts the annual ratio study of selected utility properties to gauge the appraisal district's performance. The PTAD utilizes the same valuation methodology to estimate appraisal valuations of utility properties and the results, when compared to the appraisal valuation estimated by the appraisal firm for these properties yield ratios. This ratio study of certain utility properties indicates the level and uniformity of appraisal for this category of property.

STAFF PROVIDING SIGNIFICANT MASS APPRAISAL ASSISTANCE

Attachment A

Wardlaw Appraisal Group Personnel

PROPERTY TAX APPRAISER CERTIFICATION		
TDLR #	***NAME***	***TYPE***
74200	CRAIN, MALLORY M.	APPRAISER, RPA
73616	MCFARLANE, KATHLEEN M.	APPRAISER, RPA
74717	SHERWIN, PROCTOR	APPRAISER, RPA
66026	WARDLAW, MARGARET A.	APPRAISER, RPA
73672	WILLIAMS, NOAH	APPRAISER, 3
70182	WILLIAMS, CHARLES R.	APPRAISER, RPA
71700	WILLIAMS, HAZIEL M.	APPRAISER, RPA
PROFESSIONAL ENGINEERING CERTIFICATION		
PE#	***NAME***	***BRANCH***
76914	WARDLAW, MARGARET PEGGY ANNE	PETROLEUM
77254	WILLAMS, CHARLES RAY JR	PETROLEUM
PROFESSIONAL ENGINEERING FIRM CERTIFICATION		
FIRM #	***FIRM NAME***	
5194	WARDLAW APPRAISAL GROUP LC	