MASS APPRAISAL REPORT
FOR
2013 APPRAISAL YEAR
FOR
THE ELLIS
APPRAISAL DISTRICT

By

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INTRODUCTION

The purpose of this mass appraisal report is to aid property owners, taxing entities, and the public we serve to better understand the methods and techniques utilized by the Ellis Appraisal District (EAD) in the valuation and revaluation of property within Ellis County. This report is written in compliance with Standard 6 of the *Uniform Standards of Professional Appraisal Practice* and the Texas Property Tax Code.

Taxing jurisdictions that participate in the district must use the appraisals as the basis for imposition of property taxes. The State of Texas allocates state funds to school districts based upon the district's appraisals, as tested and modified by the Property Tax Assistance Division, State Comptroller of Public Accounts.

The 2013 mass appraisal results in an estimate of the market value of all property within the district's boundaries. Where required by law to appraise property at a value other than market value, the district also estimates value on said requirement. These situations are described where applicable later in this report.

The Chief Appraiser is the chief administrative and executive officer of the appraisal district. The Chief Appraiser employs and directs the district's staff, oversees all aspects of the appraisal districts operations and performs either directly or through the district staff a variety of operations.

The Chief Appraiser's responsibilities are as follows:

1. Discover, list and appraise property
2. Determine exemption and special use valuation requests
3. Organize periodic reappraisals
4. Notify taxpayers, taxing units and the public about matters that affect property values

The EAD staff is budgeted for 24 positions and currently consists of the Chief Appraiser, Deputy Chief Appraiser, Property Owner Assistance Manager, eight Staff Appraisers, and eight support positions. All property in the district is appraised by the EAD staff with the exception of minerals and pipelines, which are appraised by Capitol Appraisal Group. Significant mass appraisal assistance was provided by Capitol Appraisal Group as well as John Ostendorf, Deputy Chief Appraiser, Greg Armstrong, Patrick Lantrip, Billie Jo McClelland, and Darla Sorrells, zone appraisers.

It is the goal of EAD staff to provide the best possible service to the property owners and taxing entities. The EAD staff promotes and adheres to the professional standards and ethics as set forth by the Texas Department of Licensing and Regulation and the Texas Association of Appraisal Districts.

SUMMARY OF PROPERTIES APPRAISED

EAD is an Appraisal District formed by the Texas Legislature in 1979 and is charged with the appraisal of all taxable property within the 41 taxing entities within the district's boundaries. Currently these taxing entities are as follows:

Ellis County	Avalon ISD
Ellis County Lateral Road	Ennis ISD
City of Bardwell	Ferris ISD
City of Cedar Hill	Frost ISD
City of Ennis	Italy ISD
City of Ferris	Maypearl ISD
City of Garrett	Midlothian ISD
City of Glenn Heights	Milford ISD
City of Grand Prairie	Palmer ISD
City of Italy	Red Oak ISD
City of Mansfield	Waxahachie ISD
City of Maypearl	Ellis County ES District #1
City of Midlothian	Ellis County ES District #2
City of Milford	Ellis County ES District #3
City of Oak Leaf	Ellis County ES District #4
City of Ovilla	Ellis County ES District #5
City of Palmer	Ellis County ES District #6
City of Pecan Hill	Ellis County ES District #7
City of Red Oak	Ellis County ES District #8
City of Venus	Ellis County ES District #9
City of Waxahachie	

The 2012 certified tax roll for the Ellis Appraisal District consisted of 79,410 parcels. The breakdown of these parcels was as follows:

Single Family Residential	44,607
Multi Family Residential	833
Mobile Homes	3,927
Vacant Lots	8,762
Vacant Acreage	10,832
Commercial	2,516
Minerals	1,365
Utilities	690
Personal Property	3,365
Exempt Property	2,513

The property rights appraised were fee simple interests, with the exception of leasehold interests in property exempt to the holder of the property's title. The latter are appraised under a statutory formula described in Sec. 25.07, Texas Property Tax Code. The description and identification of each property appraised is included in the appraisal records submitted to the Ellis Appraisal Review Board each year.

Supporting information relied on for this report, such as individual property records, sales ratio reports, market studies, modeling documentation, appraisal manuals and procedures, regulations and statutes is voluminous and is generally kept in an electronic format and is available to the general public at the appraisal district or its website, except where protected by statute by confidentiality regulations.

GENERAL ASSUMPTIONS AND LIMITING CONDITIONS

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

The appraisals were prepared exclusively for ad valorem tax purposes. The property characteristic data upon which the appraisals are based is assumed to be correct. Physical inspections and/or inspections via imagery of the property appraised were performed as staff resources and time allowed.

Validation of sales transactions occurred through questionnaires to buyer and seller, telephone survey and field review. In the absence of such confirmation, residential sales data obtained from vendors was considered reliable.

- No responsibility is assumed for the legal description or for matters including legal or title considerations. Title to any property is assumed to be good and marketable, unless otherwise stated.
- All property is appraised as if free and clear of any or all liens or encumbrances, unless otherwise stated. All taxes are assumed to be current.
- All property is appraised as though under responsible, adequately capitalized ownership and competent property management.
- All engineering is assumed to be correct. Any plot plans and/or illustrative material contained with the appraisal records are included only to assist in visualizing the property.
- It is assumed that there is full compliance with all applicable federal, state and local environmental regulations and laws unless noncompliance is stated, defined and considered in this mass appraisal report.
- It is assumed that all applicable zoning and use regulations and restrictions have been complied with unless a nonconformity has been stated, defined and considered in this mass appraisal report.
- It is assumed that all required licenses, certificates of occupancy, consents or other legislative or administrative authority from any local, state or national government or private entity or organization have been or can be obtained or renewed for any use on which the value estimate contained in this report is based.
- It is assumed that the utilization of the land and improvements of the properties described are within the boundaries or property lines, and that there are no encroachments or trespasses unless noted on the appraisal record.

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

Texas is a non-disclosure state in which buyers and sellers are not required to report sales transactions to the ad valorem property appraiser. EAD uses great diligence in attempting to acquire sales data, but is limited in its ability to gather sales data by the current legislative scheme.

EFFECTIVE DATE OF APPRAISAL AND DATE OF THE REPORT

With the exception of certain inventories for which the property owner has elected a valuation date of September 1, 2012, all appraisals are as of January 1, 2013. To receive the September 1 appraisal date, the property owner must have filed an application by July 31, 2012. The date of this report is April 1, 2013.

DEFINITION OF MARKET VALUE

Except as otherwise provided by the Texas Property Tax Code (hereafter "Tax Code"), all taxable property is appraised at its "market value" as of January 1. Under the tax code, "market value" means the price at which a property would transfer for cash or its equivalent under prevailing market conditions if:

- exposed for sale in the open market with a reasonable time for the seller to find a purchaser;
- both the seller and the 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 several different categories of property. Specially appraised property is taxed on a basis other than market value as defined above. These categories include residential homestead property (Sec. 23.23, Tax Code), agricultural and timber property (Chapter 23, Subchapters C and D, Tax Code), real and personal property inventory (Sec. 23.12, Tax Code), certain types of dealer inventory (Sec. 23.121, 23.124, 23.1241 and 23.127), and nominal (Sec. 23.18) or restricted use properties (Sec. 23.83). The EAD Appraisal Manual contains detailed information on the appraisal of specially appraised property and is incorporated herein by reference.

AREA ANALYSIS

EAD appraises all properties within the physical boundaries of Ellis County. Ellis County is located in North Central Texas and is bordered to the north by Dallas County, to the east by Kaufman County, to the south by Navarro and Hill Counties, to the west by Johnson and Tarrant Counties.

Ellis County is in transition from a rural county with an agricultural based economy to a county with a growing population and a balanced agribusiness and commercial/industrial tax base. Ellis County is currently one of the fastest growing counties in the state.

Waxahachie, the largest town and county seat, is on Interstate 35E thirty miles south of Dallas. Midlothian is the second largest city in Ellis County and is located on Highway 67 and Highway 287 about 25 miles south of Dallas and 10 miles northwest of Waxahachie.

Ellis County has three cement plants and a steel plant located in Midlothian. Power plants have been built in Midlothian and Ennis. The Midlothian community is also home to a Railport and Tax Increment Reinvestment Zone housing distribution centers for Toys R Us and Target. Owens Corning, Rock-Tenn, and Cardinal IG are a few of the varied manufacturing plants located in the Waxahachie community. The Ennis community has a thriving industrial park with industries like Sterilite Corporation, CVS Pharmacy, National Envelope and Lowes Distribution and a number of industries including Elk Roofing, Schirm USA, and Tamko. The proximity to Dallas and the Metroplex has a large impact on the values of properties within the county.

OVERVIEW OF TYPES OF PROPERTIES APPRAISED

There are four major categories of property appraised by EAD. These categories are:

> Real Property: Residential, Multi-family, Commercial, Vacant residential lots, Vacant commercial lots, Vacant rural land and improvements on rural land.
>
> Personal Property: Business personal property and Industrial personal properties.
>
> Utilities: Telephone companies, Power companies, Gas companies and Cable companies.
>
> Minerals: Oil and Gas

The Property Tax Assistance Division of the State Comptroller's office requires properties to be identified by using a standard identification code. The codes currently used by EAD are as follows:

A1	Real residential single family
A2	Real residential mobile home
B1	Real residential multi-family 10+ units
B2	Real residential duplexes 1-10 units
C1	Vacant residential lots in a city
C2	Vacant commercial lots
C3	Vacant residential lots out of city limits

D1	Acreage farm and ranch land
D2	Undeveloped land
E1	Farm/ranch house with limited acreage
E2	Farm/ranch mobile home with limited acreage
E3	Farm/ranch improvement only
E4	Imps on acreage other than residential
F1	Real commercial
F2	Real industrial
G1	Producing oil & gas
G2	Non-producing oil & gas
G3	Producing coal/lignite
G4	Non producing coal/lignite
G5	Producing sulfur
G6	Non-producing sulfur
G7	Service wells
G8	Producing clay
J1	Water systems
J2	Gas distribution systems
J3	Electric companies
J4	Telephone companies
J5	Railroads
J6	Pipelines
J61	Pipelines – other personal
J7	Cable TV systems

J8	Compressors & pump stations
J9	Railroad rolling stock
L1	Business personal property
L2	Industrial personal property
L1E	Leased equipment
L1V	Leased vehicles
M1	Mobile homes improvement only
O	Residential inventory improvements
OL	Residential inventory land
S1	Motor vehicle inventory
S2	Manufactured housing inventory
S3	Heavy equipment inventory
S4	Vessel & outboard motor inventory
X	Exempt property

HIGHEST AND BEST USE ANALYSIS

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

§ 23.01. Appraisals Generally

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

(b) The market value of property shall be determined by the application of generally accepted appraisal methods and techniques. If the appraisal district determines the appraised value of a property using mass appraisal standards, the mass appraisal standards must comply with the Uniform Standards of Professional Appraisal Practice. The same or similar appraisal methods and techniques shall be used in appraising the same or similar kinds of property. However, each property shall be appraised based upon the individual characteristics that affect the property's market value.

EAD appraises all properties in accordance with their highest and best use, except when prohibited to do so by the Texas Property Tax Code. While there is no specific statute defining highest and best use as it applies in appraisals conducted under the Property Tax Code, Texas courts have acknowledged that highest and best use is a factor that must be considered in determining market value. King v. Real 466 S.W.2d 1 TEX.Civ.App., 1971, Exxon Pipeline Co. v. Zwahr 2002 WL 1027003 Tex.,2002.

In order to complete the highest and best use analysis of a property, an appraiser must estimate its highest and best use as if the land were vacant. This estimate ignores the value of and restrictions created by existing improvements. It is the highest value the land could have if it were available for any legal, permissible, physically possible and economically feasible kind of development.

In determining highest and best use, preliminary judgments are made by appraisers. The appraisers are normally aware of zoning regulations within physical boundaries of the city.

Most EAD property records contain information regarding lot size, frontage, and other characteristics; therefore, appraisers normally make judgements on possible site uses. Economically feasible and most profitable uses are determined by observing surrounding property. However, changes in property use require a more detailed and technical highest and best use analysis. These studies are usually performed in the office.

MARKET ANALYSIS

Economic trends, national, regional and local trends affect the universe of property appraised in Ellis County. An awareness of social, economic, governmental and environmental conditions is essential in understanding, analyzing and identifying local trends that affect the real estate market.

Market analysis is performed throughout the year. Both general and specific data is collected and analyzed.

Examples of sources of general data include "*Tierra Grande*" issued by The Real Estate Center at Texas A&M University, "*The Appriser*" published by The Texas Association of Appraisal Districts and "Texas Assessor's News" published by the Texas Association of Assessing Officers. When possible, local sources such as lending institutions and the Chamber of Commerce are used to obtain financing information and demographics and labor statistics.

Sales information is received from various sources. Asking prices are gathered from the local paper and realtor listings. Information is also gathered from conversations with local real estate appraisers, agents and brokers.

EAD employees go to the Ellis County Courthouse on a regular basis to obtain all deed transactions. Once ownership is identified, an informational letter and questionnaire are mailed to the buyer to obtain information on the sale. This information is not mandatory in the State of Texas and only a small percentage of letters are returned with useful information. This presents a problem in that there is sometimes inadequate sales data to perform as thorough an analysis of sales data as *USPAP* would require. However, every effort is made to use what data is available. The Property Tax Assistance Division also sends out sales letters and that data is made available to EAD at least once per year. EAD also subscribes to *MLS*, Loopnet, and Costar, and conducts property owner interviews to obtain sales information.

EAD currently conducts revaluation on a three-year rotation in accordance with the Reappraisal Plan. One-third of the district is reappraised every year. The revaluation includes the inspection of properties and the updating of all information on the properties. Sales and market analysis are performed each year on all properties, as information is available. Each year new properties are inspected, measured and added to the roll. In addition, building permits are obtained from the county and cities and changes to accounts are made as indicated. Individual properties are also reappraised when changes to the condition as the property warrants; for example: fire, remodeling or an addition or demolition of a portion of the improvement. Appraisers will perform detailed exterior field inspections of properties if requested by the owner.

Appraisers performing revaluation in the field have property records that contain specific information regarding the property being appraised. These records contain brief legal descriptions, ownership interest, property use codes, property addresses, land size and characteristics, sketches of improvements as well as any available detailed information of the improvements.

Field inspections require the appraisers to check all information on the property and to update as necessary. The appraiser takes a digital photo of each property inspected. The appraiser notes their opinion of classification, condition and characteristics of the property. If changes in the size of any structures are observed, the appraiser measures and lists those dimensions.

DATA COLLECTION/VALIDATION

The EAD replacement cost and value schedules include land and residential improvements. Commercial and residential schedules are based on *Marshall and Swift Valuation Service* and personal property schedules are based on the Property Tax Assistance Division appraisal manual or *Marshall and Swift.* Personal property renditions provided by property owners are also used in the valuation of business personal property. *Marshall and Swift Valuation Service* is a nationally based cost manual and is recognized throughout the nation by the real estate industry. The cost manual is based on cost per square foot and also the unit in place method. The unit in place method involves the estimated cost by using actual building components. This nationally based cost information service provides the base price of buildings as per classification with modifications for characteristics that either enhance or detract from value. The schedule is then modified for time and location.

Renditions are confidential sources and cannot be used for specific information. However, data from renditions may be compared with data from cost manuals and used to test their accuracy.

EAD schedules are then developed from a combination of each of these sources. Schedules may also be modified by use of local market data (sales information) to further ensure the accuracy of the cost and value schedules.

Data on individual properties is also collected from the inspection, compiled and analyzed. Buildings and other improvements are inspected in the field, measured and classified. The appraiser estimates the age of improvements and determines the condition of the improvements. This data is used to compile depreciation (loss of value) tables and any notes pertaining to the improvements are made at this time.

Residential dwellings are classified for quality and type of construction, whether frame or brick veneer. The classifications are **Low Cost**, **Fair**, **Average**, **Good**, **Very Good** and **Excellent**. Low Cost being the most basic of structures using the poorest quality materials and lowest workmanship while an Excellent structure is of the highest possible quality using only the best of materials and the highest and best quality workmanship available.

The age of an improvement is used to estimate depreciation and is based on the effective age of improvements. Effective age is the age the property appears to be due to maintenance and upkeep. Effective age for a house that is properly maintained may be its actual or chronological age. However, if a structure suffers from deferred maintenance due to neglect, its effective age may be older than the actual age. In contrast, if a house is an older structure and has been remodeled or updated, its effective age may be less than its actual age.

Physical depreciation is estimated by condition of the improvements. Condition ranges from poor to excellent. Appraisers in the field usually inspect structures from exterior perspectives. The interior condition is assumed to be similar to the exterior. EAD appraisers will not enter an occupied home, but will consider any evidence regarding the interior condition provided by the property owner, such as photos, estimates, etc.

Foundation failure may occur in varying degrees and may also result in loss of value. EAD makes allowances for foundation problems on a case by case basis.

Additional depreciation may by estimated for a variety of reasons including functional obsolescence resulting from bad floor plans or out of date construction methods. Economic obsolescence results from a loss of value to a property due to adverse influences from outside the physical boundaries of the property. Examples of economic obsolescence may be proximity to a landfill, residences located in an airport flight path, etc.

VALUATION ANALYSIS

EAD valuation schedules are divided into four main classifications, residential, commercial, land, and business personal property. These schedules are based on the most appropriate data available. Depreciation tables and schedules (loss of value schedules) are also included within these schedules. These tables are calibrated from cost as well as sales data and updated as needed.

Miscellaneous special categories such as residential inventory, dealer's inventory, and agricultural productivity valuation are appraised using different techniques. Detailed information on the appraisal methods for the miscellaneous categories is contained in the EAD Appraisal Manual.

THREE APPROACHES TO VALUE

Texas law requires all three approaches to value be considered – cost, sales comparison (market), and income. Using multiple approaches whenever possible also provides a check versus the values obtained from other approaches. If a value can be determined using multiple approaches, then the value arrived at via the various approaches must be reconciled. The appraiser must then choose the approach to value that best estimates market value.

COST APPROACH

The cost approach is best used for properties where sales and income data are scarce. These tend to be unique properties. This method works best for newer properties, because accrued depreciation must be estimated.

EAD cost schedules are based on *Marshall and Swift Valuation Service* and personal property schedules are based on the Property Tax Assistance Division appraisal manual and *Marshall and Swift. Marshall and Swift Valuation Service* is a national based cost manual and is recognized throughout the nation by the real estate industry. The cost manual is based on cost per square foot and also the unit in place method. The unit in place method involves the estimated cost by using actual building components. This nationally based cost information service provides the base price of buildings as per classification with modifications for characteristics that either enhance or detract from value. The schedule is then modified for time and location to make it current and specific to Ellis County.

Field appraisers measure and class properties in accordance with the commercial, residential, or personal property classification guidelines. The appraiser also estimates the condition and effective age of the improvements. Additional depreciation may by estimated for a variety of reasons including functional obsolescence resulting from bad floor plans, out of date construction methods, or superadequacies. Economic obsolescence results from a loss of value to a property due to adverse influences from outside the physical boundaries of the property. Examples of economic obsolescence may be proximity to a landfill, residences located in an airport flight path, etc. Economic and functional depreciation are estimated based on the estimated impact to market value due to economic or functional obsolescence. All field work is reviewed by a zone appraiser.

The basic formula for the cost approach to value is as follows:

Market Value = RNCLD + Land Value

(RCNLD = Replacement Cost New Less Depreciation)

Land value must be derived from either the market or income approach. EAD appraisers generally use the market approach due to the lack of reliable income data for valuing land.

The cost approach is best used for newer properties, where sales and income data are scarce. These tend to be unique properties. Because accrued depreciation must be estimated, this method works best for newer properties where accrued depreciation is generally less and therefore less subjective. Examples of properties that EAD typically values via the cost approach are industrial buildings and large, unique houses, and business personal property.

RESIDENTIAL SCHEDULES

Residential valuation schedules are cost based tables taken from *Marshall and Swift Valuation Service* adjusted to the local market. That is, the cost reflects actual replacement cost new of the subject property. Market research indicates that the common unit of comparison for new residential construction as well as sales of existing housing is the price paid per square foot. The value of extra items is based on their contributory value to the property. This value may be estimated by the price per square foot or a value of the item as a whole. This data is extracted from the market by paired sales analysis and conversations with local appraisers and brokers.

The residential schedule is based on the size, age and condition of structure, quality of construction, contributory value of extra items and land value. Each of these variables has a direct impact on the cost as well as the property. The following is an example of each of the variables and how they may affect market value.

Quality of construction- Residential construction may vary greatly in quality of construction. The type of construction affects the quality and cost of material used the quality of the workmanship as well as the attention paid to detail. The cost and value of residential property will vary greatly depending on the quality of the construction. As stated above, EAD residential schedules currently class residential structures based on quality of construction from Low Cost to Excellent. This classification schedule is based on the *Marshall and Swift* definitions of residential classes of dwellings with modifications for local market.

Size of Structure- The size of a structure also has a direct impact on its cost as well as value. The larger the structure, the less the cost per square foot. EAD schedules are graduated in size increments from 100 to 200 square feet, depending on market conditions. The Property Tax Assistance Division and *Marshall and Swift* also support this economy of scale.

Condition of Improvements- EAD rates conditions from poor to excellent. Properties that in the opinion of the appraiser are unlivable may be given no value or salvage value.

Age of Structure- EAD residential depreciation schedule is based on *Marshall and Swift* and as stated above effective age and chronological age may be the same or different depending on the condition of the structure.

Extra Items- As stated above, extra items or amenities are valued according to their contributory value to the whole. Examples of extra items include fireplaces, swimming pools and tennis courts.

Land Value- EAD values land based on market transactions whenever possible. Specific land influences are used to adjust values for such factors as view, shape, size and topography. We use abstraction and allocation methods to ensure that the land values created best reflect the contributory market value of the land to the overall property value. As there are not always market transactions available, other methods of land valuation may be used. The two most common methods are the land residual method and the land ratio method. Land schedules are available at the appraisal district office.

COMMERCIAL SCHEDULES

Commercial properties valued via the cost approach are valued using *Marshall and Swift Valuation* schedules for commercial property. Replacement cost new is determined and then adjusted for location. Depreciation is then applied using physical observation of the property. The depreciated value of the improvements is then added to the land value to arrive at the total value of the property.

PERSONAL PROPERTY SCHEDULES

The Personal Property Schedules value business furniture, fixtures and equipment as well as inventory that is taxable by law. Business vehicles located within the appraisal district boundaries are also valued.

Business personal property values are derived from several sources. Business owners are required by Texas Law to render their business personal property each year. It is the experience of the district that about 70% of businesses render each year. Rendered values are used on business personal property if the rendered value is reasonable for the type of business and within acceptable ranges when compared to the Property Tax Assistance Division or *Marshall and Swift* personal property schedules for the type of business rendered. Should the rendered values not be acceptable, Property Tax Assistance Division or *Marshall and Swift* schedules are used to estimate a value.

Values on business personal property accounts not rendered are established using personal property schedules based on the Standard Industry Code (SIC), Property Tax Assistance Division, and *Marshall and Swift* schedules for the type of business being valued. For inventory valuation, this ensures the proper level of trade is considered. Physical depreciation is determined by the age of the property and its expected life. Economic and functional depreciation are estimated on a case by case basis. Schedules are available in the appraisal district office.

Business vehicles are valued based on *N.A.D.A. Used Car Guide* wholesale value for the particular make, model and age of the vehicle. The appraisal district used a report obtained from Texas Vehicle Information and Computer Services, which list vehicles registered in Ellis County on January 1 of each year. This report uses the vehicle identification number to determine make, model and vehicle characteristics to determine *N.A.D.A.* value. This report along with renditions, physical observations and city reports are used to discover and list vehicles that are taxable within the county. When adverse factors such as high mileage are known then the appropriate adjustments are made to value.

INCOME APPROACH TO VALUE

Many properties, especially commercial properties, are best valued via the income approach. Many properties sell for their income producing capacity. Examples of such properties are duplexes, shopping centers, apartments, and office buildings. When the income approach is the most appropriate approach for the valuation of a subject property, the appraiser chooses the income approach to override the value arrived at via the cost approach.

Income producing properties are placed on income schedules that are derived from data collected from landlords, tenants, and market surveys. Schedules are built based on type of property, class within each type, and economic area. Similar properties are placed on like schedules to ensure equity. EAD income schedules are modeled on the concept of market rent, vacancy and collection loss, expenses, and cap rate for the respective type of income producing property and economic area.

The use of the income approach to value is particularly useful for properties in which sales data is scarce and the market indicates the property is likely to sell for its income producing capacity.

The first step in the income approach pertains to the estimation of market rent. This is derived primarily from actual rent data furnished by property owners and lessees and from regional information obtained from various sources.

A vacancy and collection loss allowance is the next item to consider in the income approach. The projected vacancy and collection loss allowance is established from actual data furnished by property owners and local market survey trends. This allowance accounts for periodic fluctuations in occupancy, both above and below an estimated stabilized level. This feature may also provide for a reasonable lease-up period for multi-tenant properties, where applicable. The market derived stabilized vacancy and collection loss allowance is subtracted from the potential gross rent estimate to yield an indication of estimated annual effective gross rent to the property.

Next, a secondary income or service income is considered and, if applicable, calculated as a percentage of stabilized effective gross rent. Secondary income represents parking income, escalations, reimbursements, and other miscellaneous income generated by the operations of real property. The secondary income estimate is derived from actual data collected and available market information. The secondary income estimate is then added to effective gross rent to arrive at an effective gross income, when applicable.

Allowable expenses and expense ratio estimates are based on a study of the local market, with the assumption of prudent management. Relevant expense ratios are developed for different types of commercial property based on use and market experience.

Another form of allowable expense is the replacement of short-lived items (such as roof, floor coverings, air conditioning units, or appliances) requiring expenditures of lump sum costs. These expenses when annualized are known as replacement reserves.

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

Return rates and income multipliers are used to convert operating income expectations into an estimate of market value for the property under the income approach. These include income multipliers and overall capitalization rates. Each of these multipliers or capitalization rates are considered and used in specific applications. Rates and multipliers may vary between property types, as well as by location, quality, condition, design, age, and other factors. Therefore, application of the various rates and multipliers must be based on a thorough analysis of the market for individual income property types and uses. These procedures are supported and documented based on analysis of market sales for these property types.

Capitalization analysis is used in the income approach models to form an indication of value. This methodology involves the direct capitalization of net operating income as an indication of market value for a specific property. Capitalization rates applicable for direct capitalization method and yield rates for estimating terminal cap rates for discounted cash flow analysis are derived from the market. Sales of improved properties from which actual income and expense data are obtained provide a very good indication of property return expectations a specific market participant is requiring from an investment at a specific point in time. In addition, overall capitalization rates can be derived and estimated from the built-up method (band-of-investment). This method relates to satisfying estimated market return requirements of both the debt and equity positions in a real estate investment. This information is obtained from available sales of property, local lending sources, and from real estate and financial publications.

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

Economic areas are defined whenever the district has sufficient income information to group similar types and classes of income producing properties. Income schedules are developed for these economic areas and all properties within the grouping are valued via the appropriate income schedule to ensure equitable treatment of similar properties.

SALES COMPARISON (MARKET) APPROACH

Whenever possible, the sales comparison approach is used to appraise properties. This method is preferred because data is taken directly from the market. However, this method can only be used for properties in which there is sufficient sales information.

Sales information is received from various sources. Listing prices are gathered from newspaper and realtor listings, entered into the CAMA system, and reviewed monthly for outliers and expired listings.

Sales letters are mailed to the buyer to obtain information on the sale. EAD also subscribes to *MLS* and conducts property owner interviews to obtain sales information. Whenever talking with a property owner and an account reflects a recent transaction, EAD staff ask the property owner if they would be willing to share the sales information in order to increase the accuracy of EAD data.

The appraisal district's CAMA system is based on a cost approach to value. All improvements are measured and classed. When the sales comparison method is used for improved properties, a modifier is applied to the improvements (on a neighborhood basis) to bring cost in line with market. This approach is also known as a modified cost approach.

Although EAD currently does revaluation on a three-year rotation, with one-third of the district is re-inspected every year, all properties must be valued at market value each year. Sales ratio studies and profiling are done for all classes of property in all school districts and market areas at least annually. Appraisers are responsible for running all sales ratio studies and profiles within their assignment area. Residential appraisers are responsible for all properties in their zone and all land under 10 acres, except for commercial properties. The land/ag appraiser is responsible for all properties exceeding 10 acres, except commercial land. The commercial appraiser is responsible for all commercial real and business personal property.

STATISTICAL ANALYSIS

Properties are defined by market area or "neighborhood". Neighborhoods consist of properties that share common characteristics and should be valued similarly in the marketplace. Neighborhoods are grouped by like land size, neighborhood demographic, class range, size, and age. A homogeneous neighborhood is a neighborhood where all of the properties are similar in age, class, and size. This is often the case for many subdivisions. All properties in a homogeneous neighborhood should sell in a fairly tight price range, differing only for size and amenities.

EAD categorizes every residential property into a neighborhood based on the factors listed above in order to compare all like properties, sold and unsold, and ensure that all are valued at market value and treated equitably. When sales or income data demonstrate that current valuations need to be adjusted to achieve market value, all properties in the same neighborhood grouping are adjusted with the same adjustment factor.

The district's primary approach to the valuation of residential properties uses a hybrid cost-sales comparison approach. This type of approach accounts for neighborhood market influences that cannot be captured in a purely cost model.

The following equation denotes the hybrid model used:

$$MV = LV + (RCNLD*MA)$$

The estimated market value (MV) of the property equals the land value (LV) plus the replacement cost new of property improvements less accrued depreciation (RCNLD) multiplied by a market adjustment (MA) derived from sales analysis. As the cost approach separately estimates both land and building contributory values and uses depreciated replacement costs, which reflect only the supply side of the market, it is expected that adjustments to the cost values may be needed to bring the level of appraisal to an acceptable standard as indicated by market sales.

Neighborhoods are reviewed at least annually to verify all properties within a neighborhood should remain in that neighborhood. Since neighborhoods are often combinations of subdivisions and other properties considered to be like properties, the market may demonstrate that those assumptions no longer reflect reality. Similarly, two or more neighborhoods that have similar characteristics, may be able to be merged if market conditions indicate they are selling the same. This can be determined by comparing the market adjustments applied to each neighborhood. If two or more neighborhoods that have similar characteristics also have a similar or equal market adjustment, they should be merged. This process ensures there are sufficient comparables for analysis and streamline the valuation process. However, properties are to be removed from a neighborhood only by groups, such as a subdivision, or class of like properties. Individual properties are not removed from a neighborhood merely because of sales ratio.

Sales Ratio Reports and Profiling in EAD's CAMA system provide a great deal of appraisal information. The overall level of appraisal, coefficient of dispersion (COD), price related differential (PRD), class breakdown, difference between sold and unsold properties.

EAD performs statistical analysis at least annually to confirm that values are equitable and consistent with the market. Ratio studies are conducted on all property in the district to judge the two primary aspects of mass appraisal accuracy, level and uniformity of value. Appraisal statistics of central tendency and dispersion generated from sales ratios are available for property within an ISD. These statistics include, but are not limited to, the weighted mean, standard deviation and coefficient of dispersion and provide the analysts an analytical tool by which to determine both the level and uniformity of appraised value in the district.

The analyst, based on the sales ratio statistics and designated parameters for valuation update, makes a preliminary decision as to whether the value level needs to be updated in an upcoming reappraisal, or whether the level of market value is at an acceptable level.

Ratio studies are usually done on a countywide base of all sales in the county and then by residential classification and market area. The median ratio within each classification is then compared to the desired ratio to determine if adjustments should be made. The coefficient of dispersion is also studied to indicate how tight the ratios are in relation to measures of central tendency. The median and coefficient of dispersion are good indicators that identify statistically the results of the valuation process. All statistical measure are reviewed again after any adjustments are made to confirm the adjustment produced the desired results.

RATIO STUDY STANDARDS

EAD adheres to the following standards recommended by the IAAO *Standard on Ratio Studies.*

A. *Appraisal Level* – The overall level of appraisal for the jurisdiction and each major stratum of properties should by within 5 percent of the legal standard – 100 percent of market value.

B. Appraisal Uniformity

1. Uniformity Amount Strata. The level of appraisal for each stratum should be within 5 percent of the overall level of appraisal for the jurisdiction.

2. Single Family Residential Strata. CODs generally should be 15.0 or less and for areas of newer and fairly similar residences, 10.0 or less.

3. Strata Composed of Income Producing Properties. CODs should by 15.0 or less for larger, urban jurisdiction and 20.0 or less in small rural jurisdictions.

4. Vacant Land. CODs should be 20.0 or less.

5. Other Strata. Target CODs should reflect the nature of the properties involved and the availability of reliable market indicators.

6. Vertical Equity. PRDs (Price related differential) should generally lie between 0.98 and 1.03. An appropriate statistical test should be conducted when bias is indicated.

ADJUSTING SALES FOR TIME

EAD monitors changes in price levels and, if necessary, adjusts sales prices for time. Sales are adjusted to the appraisal date of January 1. The adjustment factors are developed for each market area in the county. Adjustment factors are developed by comparing per unit value changes over time. Sales prices are divided by appropriate units of comparison and plotted against time.

Comparisons are made plotting sale/appraisal ratios against the date of sale. An upward trend in the ratios tends to indicate inflation and a downward trend indicates deflation in the market.

Once a reliable time adjustment factor has been developed for a stratum it is used to adjust sales to the appraisal date. This factor is used when analyzing sales data for potential market adjustments that occur annually.

Data sources for time adjustments include the S&P/Case-Schiller Index, the Texas A&M Real Estate Center, the North Texas Realtors Association, and from actual sales in Ellis County.

INDIVIDUAL VALUE REVIEW PROCEDURES

In order for comparable sales data to be considered reliable it must contain a sales date, sales price, financing information, tract size and details of the improvements. Sales data is gathered by sending sales letters to the buyer properties that the district knows changed ownership. EAD also subscribes to the *Multiple Listing Service*. Commercial sales are confirmed from the direct parties involved whenever possible. Confirmation of sales from local real estate appraisers is also considered a reliable source.

Sales data is compiled and the improved properties are physically inspected and photographed. All data listed on the property record card is verified and updated as needed including building classification, building size, additions or added out buildings, condition of structures and any type change in data or characteristics that would affect the value of the property.

Individual sales are analyzed to meet the test of market value as defined by Section 1.04(7) of the Texas Property Tax Code. Examples of reasons why sales may be deleted or not considered are:

1. Property acquired through foreclosures or auction.
2. Property sold between relatives.
3. The buyer or seller is under duress and may be compelled to sell or purchase.
4. Financing may be non-typical or below or above prevailing market rates.
5. Considerable improvements or remodeling have been done since the date of the sale and the appraiser is unable to make judgments on the property's condition at the time of the transaction.
6. Sales may be unusually high or low when compared with typical sales located in the market area. Some sales may be due to relocation or through divorce proceedings.

7. The property is purchased through an estate sale.
8. The sale involves intangibles, such as goodwill, that are to value.
9. There are value-related problems associated with the sale, i.e. incorrect land size or square footage of living area.
10. Property use changes occurring after the sale.

APPRAISAL PERFORMANCE TESTS AND ATTAINMENT

Ratio study results for the 2013 mass appraisal are as follows:

Category	# of Sales	Median Ratio	COD	PRD
A	1,428	.99	4.26	.99
C	50	1.00	6.06	1.00
D/E	76	1.00	7.24	.98
F	34	1.00	4.72	.98

In accordance with Section 5.102 of the Texas Property Tax Code and Section 403.302 of the Texas Government Code, the Texas Comptroller of Public Accounts conducts an biannual property value study to determine the degree of uniformity of and the median level of appraisals by the appraisal district within each major category of property, as required by Section 5.10, Property Tax Code. The preliminary findings, based on the district's 2010 appraisal roll, were reported to the district on January 31, 2013. The overall median appraisal ratio for Ellis CAD was reported at 1.00.

The Comptroller of Public Accounts certifies a school district's local tax roll value to the Commissioner of Education if it is within the calculated statistical error margin. A margin of error of 5% is used for each school district. The 2012 findings of the ratio study reported that all school districts received their local tax roll values. The complete report for Ellis County and all school districts can be found at http://www.window.state.tx.us/propertytax/administration/pvs/findings/2012p/070index.html.

Beginning in 2010, in addition to the property value study, the Texas Comptroller of Public Accounts will conduct a biannual review of the governance of each appraisal district, taxpayer assistance provided, and the operating and appraisal standards, procedures, and methodology used by the district.

The last such review was conducted by the Property Tax Assistance Division in 2011. The results of the review, reported to the chief appraiser on January 23, 2012 reported that the district's methods, standards, and procedures exceeded requirements in all categories texted. The complete Methods and Assistance Program Report can be found at http://www.window.state.tx.us/taxinfo/proptax/map/2011/ellis-MAP.pdf. The district is undergoing another review in 2013 and anticipates another positive review.

CERTIFICATION

I certify that, to the best of my knowledge and belief:

- the statements of fact contained in this report are true and correct;
- the reported analyses, opinions and conclusions are limited only by the reported assumptions and limiting conditions, and are my personal, impartial, and unbiased professional analyses, opinions and conclusions.
- I have no present or prospective interest in the properties that are the subject of this report and I have no personal interest or bias with respect to the parties involved.
- I have no bias with respect to any property that is the subject of this report or to the parties involved with this assignment.
- My engagement in this assignment was not contingent upon developing or reporting predetermined results.
- My compensation is not contingent upon the reporting of a predetermined value or direction in value that favors the cause of the taxing jurisdiction, the amount of the value estimate, the attainment of a stipulated result, or the occurrence of a subsequent event.
- My analyses, opinions and conclusions were developed, and this report has been prepared, in conformity with the *Uniform Standards of Profession Appraisal Practice*, the International Association of Assessing Officers, and the Texas Department of Licensing and Regulation;
- I have not made a personal inspection of the properties that are the subject of this report.
- This report was prepared with the assistance of the EAD appraisal staff.

Kathy A. Rodrigue, R.P.A.
Chief Appraiser
Ellis Appraisal District