

Mills Central Appraisal District

Appraisal Manual



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INTRODUCTION

APPRAISAL: An estimate of value as of a specified date, usually January 1 of any given year.

MASS APPRAISAL: The process of valuing large number of properties as of a given date, using standardized procedures in an effort to achieve consistency and uniformity as applicable. And, in a manner which allows for statistical testing.

The purpose of this manual is to assist all appraisal personnel in estimating the market value of properties based on the mass appraisal concept.

The classification system and value schedules herein were prepared by using the concept of grouping similar types of improvements by the classing system.

This system has ranges in single family residences from the small inexpensive to the larger, custom built. The residences are categorized as wood frame or brick veneer. Each category contains residences identified by class, as defined by the market. The lower classes being the least expensive and the higher classes being the more expensive custom residences.

A written description of each class is furnished. Pictures of each class are included and labeled so that uniformity and equality may be more adequately maintained. Amenities and individual components that comprise a real property are evaluated in the same manner.

Mobile homes are divided into two categories, single-wide and double-wide. Mobile homes are valued using N.A.D.A. valuation guide.

“Percent Good” is the appraiser’s estimate of the actual condition of the property as well as physical and/or effective age. The correction percentages contained in this manual is self explanatory when used in conjunction with the written definitions for property types, and the Appraiser should use good judgment when evaluating property that is either below or Above the Benchmark standard for any class as defined by the market.

The primary purpose of this manual is to provide the Appraiser with information from the actual market, to appraise real property. In reality, there are circumstances where there is no market data available, in those situations there is a second real property residential manual that is based on historical costs data that have been derived from the local area information.

The procedures necessary to begin using this guide are encompassed in the “Appraisal Process” section of this manual. This text is only on tool to be used by the appraiser. It is based on information compiled from the local sales market. All appraisers must be alert to the ever-changing real estate market, since this is what the estimates of value are based upon.

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Definition of Market Value:

The price at which a property would transfer for cash or its equivalent under prevailing under market conditions if:

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

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THE APPRAISAL PROCESS

The process of appraising improvements may start any time; however, normally, due to the tax calendar, appraising of real property, should commence in September, for the year prior to assessment. The routine of appraising improvements is essentially as follows:

- A. **DISCOVERY OF PROPERTY**- This may be accomplished through building permits, septic tank permits, municipal utility district water taps and on site inventory of sub-divisions and abstracts.
- B. **CORRELATION OF PROPERTY RECORDS** – This is accomplished after the discovery process has been accomplished. This step is essential to insure that real property is correctly identified, and ownership for any given parcel is accurately reflected in the Appraisal District's records.
- C. **APPRAISAL PROCEDURES** – The appraisal of improvements always require an onsite inspection of the property to be appraised or rechecked by an appraiser. The appraiser should follow the sequence of events indicated here in order to complete the appraisal process:
 - 1) Insure property being appraised is in fact the property indicated in legal description of record.
 - 2) Properly identify his or herself to the owner; manager or whomever is associated with the property.
 - 3) Accurately measure and sketch the improvements.
 - 4) Class.
 - 5) Estimate "percent good."
 - 6) Current date of the onsite review and Appraiser's identification in working papers.
 - 7) Any improvements not capable of being classed in a common classing system will have to be classed a special type improvement and, therefore, the market value must be estimated by a residential appraisal manual such as Marshall & Swift.
 - 8) Complete and review parcel record change sheets.
 - 9) Enter data into the CAMA system, and for quality assurance review. The primary purpose of this review is to insure that proposed values have been met using present appraisal standards.

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

Appraisal Resources

- **Personnel** – The appraisal activities consists of two appraisers and two clerical personnel.
- **Data** – The data used by field appraisers includes the existing property characteristic information contained in CAMA (Computer Assisted Mass Appraisal System) from the district's computer system. The data is printed on a property record sheet, or personal property data sheets. Other data used includes maps, sales data, fire and damage reports, building permits, photos and actual cost information.

PRELIMINARY ANALYSIS

Data Collection/Validation

Data collection of real property involves maintaining data characteristics of the property on CAMA (Computer Assisted Mass Appraisal). The information contained in CAMA includes site characteristics, such as land size and topography, and improvement data, such as square foot of living area, year built, quality of construction, and condition. Field appraisers establish uniform procedures for the correct listing of real property. All properties are coded accordingly and the approaches to value are structured and calibrated based on this coding system. Data collection for personal property involves maintaining information on Gemini (Appraisal Software and Personal Property System). The type of information contained in Gemini includes personal property such as business inventory, furniture and fixtures, machinery and equipment, cost and location. The field appraisers conducting onsite inspections use a personal property manual during their initial training and as a guide to correctly list all personal property that is taxable.

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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 received from taxing jurisdictions that require a property owner to take out a building permit. Paper permits are received and matched manually with the property's tax account number for data entry.

Data review of the entire County is generally a good source for data collection. Appraisers drive the entire County to review the accuracy of our data and identify properties that have been relisted. The sales validation effort in real property pertains to the collection of data on properties that have sold. In residential, the sales validation effort involves onsite inspection by field appraisers to verify the accuracy of the property characteristics data and conformation of the sales price. In commercial, the commercial sales group is responsible for contacting both grantee and 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 enough data to allow correction of records without having to send an appraiser onsite. For the property owner without access to the internet, letters are often submitted notifying the district of inaccurate data. Properties identified in this manner are added to a work file and inspected at our earliest opportunity.

Data Collection Procedures

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

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INDIVIDUAL VALUE REVIEW PROCEDURES

Field Review

The date of last inspection, and the CAD appraiser responsible are listed on the CAMA record. If a property owner or jurisdiction disputes the district's records concerning this data during a hearing via a telephone call or correspondence received; CAMA may be altered based on the evidence provided. Typically, a field inspection is requested to verify this evidence for the current year's valuation or for the next year's valuation. Every year a field review of certain areas or neighborhoods in the jurisdiction is done.

Office Review

Office reviews are completed on properties where information has been received from the owner of the property. Data mailers, sent in mass, or at the request of the property owner, frequently verify the property characteristics or current condition of the property. When the property data is verified in this manner, field inspections are not required.

PERFORMANCE TEST

The valuation appraisers are responsible for conducting ratio studies and comparative analysis. (Refer to individual valuation process summary reports.)

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

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RESIDENTIAL VALUATION PROCESS

INTRODUCTION

Scope of Responsibility

The Residential Valuation appraisers are responsible for developing equal uniform market values for residential improved and vacant property.

Appraisal Resources

- **Personnel** – The Residential Valuation appraisal staff consists of two appraisers.
- **Data** – A common set of data characteristics for each residential dwelling in Mills County is collected in the field and data entered to the computer. The property characteristic data drives the computer-assisted mass appraisal (CAMA) approach to valuation.

VALUATION APPROACH

Area Analysis

Data on regional economic forces such as demographic patterns, regional location factors, employment and income patterns, general trends in real property prices and rents, interest rate trends, availability of vacant land, and construction trends and costs are collected from public sources and provide the field appraiser a current economic outlook on the real estate market. Information is gleaned from real estate publications and sources such as continuing education in the form of IAAO and TDLR classes.

Neighborhood and Market Analysis

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

The first step in neighborhood analysis is the identification of a group of properties that share certain common traits. A “neighborhood” for analysis 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

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of dwelling, quality of construction and condition of dwellings, square footage of living area, and story height. Delineation can involve the physical drawing of neighborhood boundary lines on a map, but it can also involve statistical separation or stratification based on attribute analysis. Part of neighborhood analysis is the consideration of discernible patterns of growth that influence a neighborhood's individual market. Few neighborhoods are fixed in character. Each neighborhood may be characterized as being in a stage of growth, stability or decline. The growth period is a time of development and construction. As new neighborhoods in a community are developed, they compete with existing neighborhoods. An added supply of new homes tends to induce population shift from older homes to newer homes. In the period of stability, or equilibrium, the forces of supply and demand are about equal. Generally, in the stage of equilibrium, older neighborhoods can be more desirable due to their stability of residential character and proximity to the workplace and other community facilities. The period of decline reflects diminishing demand of desirability. During decline, general property use may change from residential to a mix of residential and commercial uses. Declining neighborhoods may also experience renewal, reorganization, rebuilding, or restoration, which promotes increased demand and economic desirability.

Neighborhood identification and delineation is the cornerstone of the residential valuation system at the district. All the residential analysis work done in association with the residential valuation process is neighborhood specific. Neighborhoods are field-inspected and delineated based on observable aspects of homogeneity. Neighborhood delineation is periodically reviewed to determine if further neighborhood delineation is warranted. Whereas neighborhoods involve similar properties in the same location, a neighborhood group is simply defined as similar neighborhoods in similar locations. Each residential neighborhood is assigned to a neighborhood group based on observable aspects of homogeneity between neighborhoods. Neighborhood grouping is highly beneficial in cost-derived areas of limited or no sales, or 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 further on, is performed on a neighborhood basis, and in soft sale areas on a neighborhood group basis. Neighborhoods are not common in Mills County. Most properties differ from one another in this rural area.

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Highest and Best Use Analysis

The highest and best use of property is the reasonable and probable use that supports the highest present value as of the date of the appraisal. The highest and best use must be physically possible, legal, financially feasible, and productive to its maximum. The highest and best use of residential property is normally its current use. This is due in part to the fact that residential development, in many areas, through use of 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 misimprovements, and the highest and best use of such property is the construction of new dwellings. In areas of mixed residential and commercial use, the appraiser reviews properties in these areas on a periodic basis to determine if changes in the real estate market require reassessment of the highest and best use of a select population of properties.

VALUATION AND STATISTICAL ANALYSIS (Model Calibration)

Cost and Market Driven Schedules

All residential parcels in the district are valued from cost and market driven schedules using a comparative unit method. The district's residential cost schedules follows cost schedules and are customized to fit Mill County's local residential building and sales market.

An extensive review and revision of the residential cost schedule is performed each tax year. This process includes correlation of quality of construction factors from MCAD. In addition to the mainframe cost schedules, PC spreadsheet 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 cost system.

Sales Information

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

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Land Analysis

Residential land analysis is conducted by the appraisers. The appraisers develop a base lot, primary rate, and assign each unique neighborhood to either a square foot or front foot land value. The square foot land table is designed to systematically value the primary and residual land based on a specified percentage of the primary rate. Each lot may be adjusted by a percent good or economic factor. 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.

Statistical Analysis

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

Those neighborhoods which have sufficient information are reviewed annually by the PVS 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 of 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.

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Market Adjustment or Trending Factors

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

Market value of a class of property is calculated by analyzing the price per square foot that comparable properties are selling for and applying that price per square foot back to the individual properties of that class. The appraiser may determine that an individual property may need further adjustment either by a per cent good or an economic factor. This market value is reflected on the appraisal records as a cost approach identifying contributory value for each property characteristic. The total appraised value of an individual property can then be supported by comparing it to the most comparable sales that have occurred in the market place.

If a neighborhood is to be updated, the appraiser uses a market ratio study that compares recent sales prices of properties appropriately adjusted for the effects of time within a delineated neighborhood with the properties' appraised value. The calculated ratio derived from the sum of the sold properties' appraised value divided by the sum of the sales prices indicates the neighborhood level of value based on the unadjusted appraised value for the sold properties. A market adjustment factor is needed to trend the values obtained through the market 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. Once the market-trend factors are applied, a second set of ratio studies is generated that compares recent sale prices with the proposed appraised values for these sold properties. From this set of ratio studies, the appraiser judges the appraisal level and uniformity in both update and non-update neighborhoods, and finally, for the school district as a whole.

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TREATMENT OF RESIDENCE HOMESTEADS

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

- The market value; or
- The preceding year’s appraised value;
PLUS 10% of the appraised value of the property for the preceding year;
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 the following year, that home is reappraised at its market value to bring its appraisal into uniformity with other properties. An analogous provision applies to new homes. While a developer owns them, unoccupied residences are appraised as part of an inventory using the district’s land value and the developer’s construction costs as of the valuation date. However, in the year following sale, they are reappraised at market value.

INDIVIDUAL VALUE REVIEW PROCEDURES

Field Review

The appraiser identifies individual properties in critical need of field review through 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 district’s parcel count has increased through new home construction, and the homes constructed in the boom 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 contributing significantly to the market value of the property. After preliminary estimates of value have been determined in targeted areas, the appraiser takes valuation documents to the field to test the computer-assisted values against his own appraisal judgment. During this review, the appraiser is able to physically inspect both sold properties and unsold properties for comparability and consistency of values.

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Office Review

Given the lack 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 hearing protest are individually reviewed to determine if the value remains appropriate for the current year.

Once the appraiser is satisfied with the level and uniformity of value for each neighborhood within his area of responsibility, the estimates of value notice are sent.

PERFORMANCE TESTS

Sales Ratio Studies

The primary analytical tool used by the appraisers to measure and improve performance is the ratio study. The district ensures that the appraised values that it produces meet the standards of accuracy in several ways. Overall sales ratios are generated for each ISD to allow the appraiser to review general market trends within their area of responsibility, and provide an indication of market appreciation or depreciation over a specified period of time. The neighborhood descriptive statistics are reviewed for each neighborhood being updated for the current tax year. The ratio studies are designed to emulate the findings of the state comptroller's annual property value study for category A property.

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COMMERCIAL VALUATION

INTRODUCTION

Scope of Work

This mass appraisal assignment includes all commercially classed real property assigned to the commercial valuation appraisers and located within the jurisdiction of Mills County and overlapping appraisal districts. 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 interest in real property (i.e. certain multi-family housing projects). Fractional interests or partial holdings of real property are appraised in fee simple for the whole property and divided programmatically based on their prorata interests.

Procedure for Collecting and Validating Data

The data used by the commercial appraisers includes verified sales of vacant land and improved properties and the pertinent data obtained from each (conditions of sale, financing, sales price levels, vacancy, capitalization rates, income multipliers, equity dividend rates, marketing period, etc.). Other data used by the appraisers includes actual income and expense data, actual contract rental data, leasing information (commissions, tenant finish, length of terms, etc.), actual construction cost data, and in-house surveys. In addition to the actual data obtained from specific properties, market data publications are also reviewed to provide additional support for market trends. These include fee appraiser rental property surveys, many web sites from real estate organizations, professionals and individual property owners. Publications such as Texas A&M Research Center, Source Strategies, Inc-Hotel Performance Fact book, the Korpacz Survey and Appraisal Institute's economic indicators are used for income and expense data, capitalization rates, typical holding periods for real estate investments, interest rates and other pertinent real estate criteria are analyzed. In terms of commercial sales data, MCAD receives a copy of the deeds recorded in Mills County that convey commercially classed properties. The deeds involving a change in commercial ownership are entered into the sales information database and researched to obtain the pertinent sale information. For those properties involved in a transfer of commercial, a sales file is produced which begins the research and verification process. The initial step in sales verification involves a questionnaire that is mailed to the transaction grantee. If a questionnaire is answered and returned, the documented responses are recorded into the computerized sales database system. If no information is provided, verification 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. Also, closing statements are often provided during the appraisal process. The actual closing statement is the most reliable and preferred method of sales verification. After the sales data has been keyed into the database, the data is reviewed to maintain quality control.

Annually, prior to hearing season and after sales have been researched, verified, keyed into the database, and quality control has been completed, the sales data are summarized and produced into book form. The confirmed sales in the vacant land sale and commercial improved sale

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books are categorized by property and use type and are sorted by location and chronological order. These books are available to the public for use during hearings, and are also used by the MCAD appraisers during the hearing process.

Highest and Best Use Analysis

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

On the other hand, value in use represents the value of a property to a specific user for a specific purpose. This maybe significantly different than market value, which approximates market price under the following assumptions: (1) no coercion of undue influence over the buyer or seller in an attempt to force the purchase or sale, (2) well-informed buyers and sellers acting in their own best interests, (3) a reasonable time for the transaction to take place, and (4) payment in cash or its equivalent.

Model Specification

The commercial valuation function is divided into five improved property valuation groups and a vacant commercial land group. The improved real property appraisal responsibilities are categorized according to major property types of apartment, office, retail, warehouse and special use (i.e. hotels, hospitals and, nursing homes). When applicable, the cost approach to value is applied to all real property. 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. This approach also employs the sales comparison approach and or other acceptable methods in the valuation of the underlying land value.

When applicable, the income approach to value was applied to the real property that is typically viewed by market participants as "income producing" and for which the income methodology is considered a leading value indicator.

When applicable, the sales comparison (market) approach was utilized not only for estimating land value but also in comparing sales of similarly improved properties to each parcel on the appraisal roll.

The final estimate of value is reconciled depending on the quality and quantity of the data from the three approaches.

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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. Information is obtained from real estate publications and sources such as local surveys, regional newspaper real estate articles, and the Real Estate Center at Texas A&M University. Continuing education in the form of IAAO, Texas Association of Assessing Officers (TAAO), Texas Association of Appraisal Districts (TAAD) and Board of Tax Professional Examiners (BTPE) courses, and real estate seminars provide appraisers a current economic outlook on the local real estate market. Strict adherence to these procedures ensures that appraisers consider pertinent factors and trends about the forces within the governmental bodies and within the geographic boundaries of MCAD.

Neighborhood Analysis

The neighborhood is comprised of the land area and commercially classed properties located within the boundaries of this taxing jurisdiction. This area consists of a wide variety of property types including residential, commercial and industrial, and vacant acreage. Neighborhood analysis involves the examination of how physical, economic, governmental and social forces and other influences affect property values. The effect of these forces is also used to identify, classify, and organize comparable properties into smaller, manageable subsets of the universe of properties known as neighborhoods. In the mass appraisal of commercial properties are generally referred to as market areas or economic areas.

Economic areas are defined by each of the improved property use types (apartment, office, retail, warehouse and special use) based upon an analysis of similar economic or market forces. These include but are not limited similarities of rental rates, classification of projects (known as building class by area commercial market experts), date of construction, overall market activity or other pertinent influences. Property use type is the primary selection delineation criteria utilized by the commercial valuation system. All income model valuation (income approach to value estimates) is use specific. Economic areas are periodically reviewed to determine if re-delineation is required. The geographic boundaries as well as, income, occupancy and expense levels and capitalization rates by age within each economic area for all commercial use types are analyzed.

Market Analysis

A market analysis related directly to market forces affection supply and demand. This study involves the relationships between social, economic, environmental, governmental, and site conditions. Current market activity including sales of commercial properties, new construction, new leases, lease rates, absorption rates, vacancies, allowable expenses (inclusive of replacement reserves), expense ratio trends, and capitalization rate studies are analyzed. Local consultations with area real estate professionals are utilized lend support to the various assumptions utilized in the valuation of real estate.

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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.

Cost Schedules

When applicable, the cost approach to value is applied to all improved real property utilizing the comparative unit method. This methodology involves the utilization of national cost data reporting services as well as actual cost information on comparable properties whenever possible. Cost models include the derivation of 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 and other accepted methods 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 Mills 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. These are located in the Marshall & Swift. These schedules are then tested to ensure they are reflective of current market conditions. The actual and effective ages of improvements are noted. 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 personal inspection and analysis by staff commercial appraisers.

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 ration studies or other market analyses. Accuracy in the development of the cost schedules, condition ratings and depreciation schedules will usually minimize the necessity of this type of an adjustment factor.

Income Models

When applicable, the income approach to value applied to those real properties which are typically viewed by market participants as “income producing,” and for which the income methodology is considered a leading value indicator. The first step in the income approach pertains to the estimation of market rent on a per unit basis. This is derived primarily from

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actual rent data furnished by property owners and from local market study publications. This per unit rental rate multiplied by the number of units results in the estimate of potential gross rent.

The projected vacancy and collection loss allowance is established from actual data furnished by property owners and district market surveys. This allowance accounts for periodic fluctuations in occupancy, both above and below and estimated stabilized level. The market derived stabilized vacancy and collection loss allowance is subtracted from the potential gross rent estimate to yield an effective gross rent.

A secondary income or service income is calculated as a percentage of stabilized effective gross rent and / or actual data supplied by property owners and agents. 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 and is added to the effective gross rent to arrive at an effective gross income. Allowable expenses and expense ratio estimates are based on a study of the local market, with the assumption of *prudent management*. An allowance for non-recoverable expenses such as leasing costs and tenant improvements are included in the expenses. A non-recoverable expense represents costs that the owner pays to lease rental space. Different expense ratios are developed for different types of commercial property based on use. Actual expense data for the subject property is used when available for analysis and confirmation of model estimates. For instance, retail properties are most frequently leased on a triple-net basis, whereby the tenant is responsible for his prorata share of taxes, insurance and common area maintenance. In comparison, a general office building is most often leased on a base year expense stop. This lease type stipulates that the owner is responsible for all expenses incurred during the first year of the lease. However, any amount in excess of the total per unit expenditure in the first year is the responsibility of the tenant. Expense ratios are implemented based on the type of commercial property.

Another form of allowable expense is the replacement of short-lived items (such as roof or floor coverings, air conditioning or major mechanical equipment or appliances) requiring expenditures of large lump sums. When these capital expenditures are analyzed for consistency and adjusted, they may be applied on an annualized are known as replacement reserves.

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

Rates and multipliers are used to convert income into an estimate of market value. These include income multipliers, overall capitalization rates, and discount rates. Each of these is used in specific applications. Rates and multipliers also vary between property types, as well as by location, quality, condition, design, age and other factors. Therefore, application of the various rates and multipliers must be based on a thorough analysis of the market.

Capitalization Analysis and Techniques

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

Appraisal Manual

improved properties from which actual income and expense data are obtained provide a very good indication of what a specific market participant is requiring from an investment at a specific point in time. In addition, overall capitalizations rates can be derived from the built-up method (band-of-investments). This method relates to satisfying the market return requirements of both the debt and equity positions of a real estate investment. This information is obtained from real estate and financial publications.

The primary yield capitalization method used for the valuation of commercial property by the district is Discount Cash Flow analysis. Discounted Cash Flow analysis is defined as “a set of procedures in which an appraiser specifies the quantity, variability, timing, and duration of periodic income, as well as the quantity and timing of reversions and discounts each to its present value at a specified yield rate.” This technique takes the future benefits or “incomes” and converts these benefits into an indication of present value by discounting each future benefit at an appropriate yield rate. The formula is expressed as follows:

$$PV = \frac{CF_1}{1 + y} + \frac{CF_2}{(1 + y)^2} + \frac{CF_3}{(1 + y)^3} + \dots + \frac{CF_n}{(1 + y)^n}$$

Where PV represents “present value”; CF represents “cash flow”; Y represents “yield rate.”

The DCF calculations of all appropriate properties are processed and recorded via the use of Microsoft Excel spreadsheets.

A second method of yield valuation used by the commercial real department is that of Rent Loss Direct Capitalization. This technique is applied to specific properties with vacancy problems that are considered short term in nature, and is used when the appraiser concludes the discounted cash flow analysis is not needed.

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.

Care is taken by the commercial department’s management and appraisal staff to choose the appropriate income value technique for the type of property being appraised and in applying these methods in a uniform and equal way within the particular class and subclasses of commercial property being evaluated on a mass basis.

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. Pertinent data from actual sales of properties, both vacant and improved, is pursued throughout the year in order to obtain relevant information that can be used in all aspects of valuation. Sales of similarly improved properties can provide a basis for the

Appraisal Manual

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 that afford the analyst an excellent means of judging the present level and uniformity of the appraised values.

Based on the market data analysis and review discussed previously in the cost, income and sales approaches, the cost and income are calibrated and finalized. The calibration results are keyed to the schedules and models on Excel spreadsheets and applied to relevant commercial properties.

How Estimates are Reviewed

Field Review

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

Office Review

Office reviews are completed on properties not subject to field inspections and are performed in compliance with procedures and guidelines contained in Mills Central Appraisal District's Appraisal Manual. The district's Appraisal Manual outlines the application of the three approaches to value.

Office review consists of analyzing the pertinent data for each property, as well as comparing the previous values to the proposed value conclusions of the various approaches to value. The appraiser may review methodology for appropriateness to ascertain that it was completed in accordance with USPAP or more stringent statutory and district 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.

Once the appraiser is satisfied with the level and uniformity of value for the commercial property being reviewed, the estimates of value go through a process from CAMA to an ad valorem administrative review. Although the value estimates are processed in a computerized mass appraisal environment, value edits enable an individual parcel review of value anomalies before the estimate of value is released for noticing.

Appraisal Manual

Appraisal Performance test used and performance measures attained

Statistical and Capitalization Analysis

Statistical analysis of final values is an essential component of quality control. This methodology represents a comparison of the final value against the standard and provides a concise measurement of the appraisal performance. Statistical comparisons of many different standards are used including sales of similar properties, the previous year's appraised value, audit trails, value change analysis and sales ratio analysis. Appraisal statistics of central tendency and dispersion generated from sales ratios are available for each property type. These summary statistics including, but not limited to, the weighted mean, standard deviation and coefficient of variation, provide the analysts an analytical tool by which to determine both the level and uniformity of appraised value of a particular property type. The level of appraised values can be determined by the weighted mean for individual properties within a specific type, and a comparison of weighted means can reflect the general level of appraised value. Review of the standard deviation and the coefficient of variation can discern appraisal uniformity within a specific property type.

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

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

Sales Ratio Studies

Overall sales ratios are generated by property use type from the sales database and CAMA. The appraisers utilize desktop applications such as MS Access and EXCEL programs to evaluate subsets of data by property category type or a specific and unique data item. On the desktop, this may be customized and performed by building class and age basis. In many cases, field checks may be conducted to insure the ratios produced are accurate and the appraised values utilized are based on accurate property data characteristics. These ratio studies aid the appraiser by providing an indication of market activity by economic area or changing market conditions (appreciation of depreciation).

Appraisal Manual

Comparative Appraisal Analysis

Commercial appraisers perform an average unit value comparison in addition to a traditional ratio study. These studies are performed on commercially classed properties by property use type (such as apartment, office, retail and warehouse usage or special use). The objective to this evaluation is to determine appraisal performance of sold and unsold properties. Commercial appraisers examine average unit prices of sales and average unit appraised values of the same parcels and the comparison of average value changes of sold and unsold properties. These studies are conducted on substrata such as building class and on properties located within various economic areas.

Appraisal Manual

Business Personal Property Valuation Process

INTRODUCTION

Appraisal Responsibility

The typical business personal property is assessed by the Appraisal District. The appraisal district contracts with Pritchard and Abbott for minerals, industrial and utilities.

Appraisal Resources

- **Personnel** – The industrial section consists of an appraiser and an assistant. In addition, MCAD contracts with the P&A appraisal firm to value properties for which the district does not have the available personnel or resources.
- **Data** – The appraisers and contract appraisal staff inspect their assigned properties to obtain information about building, site improvements, process and shop equipment, and various items of personal property. In addition, appraisal personnel use information provided by property owners concerning the cost to purchase, install, and construct items of real and personal property. The individual characteristics of the property being appraised are the primary factors that drive the appraised value.

VALUATION APPROACH (MODEL SPECIFICATION)

Area Analysis

The scope of the 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 the general concept is the market for industrial land. The pricing of land tends to be closely tied to possible alternative uses in the area. For this reason, appraisers assigned to land valuation analyze market forces for specific areas and adjust land value schedules appropriately.

Neighborhood Analysis

Neighborhood analysis 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.

Appraisal Manual

Highest and Best Use Analysis

The highest and best use of real or personal property is the most reasonable and probable use of the property on the date of appraisal that is physically and financially feasible, legal, 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.

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 oil field related 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 district uses information from similar businesses to examine the real and 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 building. However, 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 personal property. Many items of 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. Then cost data for this type property is available and considered reliable, it is used for value estimation purposes at other plant facilities. However, on-site inspection and information provided by the property owner will affect the final value.

Appraisal Manual

DATA COLLECTION/VALIDATION

Data Sources

Renditions submitted by local businesses are a primary source of information. Throughout the year the appraisal district staff uses the local newspaper to obtain information on new and existing businesses. Word of mouth is also an excellent source of information as well as observing new businesses as they open. District staff also review assumed name certificates that have been filed with the County Clerk.

Data Collection Procedures

Information is obtained on new businesses from the newspaper, assumed name certificates, word of mouth and observation is collected during the year. This information is used to set up new accounts throughout the year so that renditions can be sent along with those for existing businesses each January. Renditions submitted by local businesses are a primary source of information.

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

The district and contract firm appraisal staff members are not assigned any one geographical area of the county. The nature of the business and whether or not the district has the staff resources available determines which properties are valued by contract firms and which properties are valued by the district's appraisal staff. New district appraisers are trained by accompanying appraisers who have performed field visits and appraisal functions for a number of years. Each district appraiser is responsible for the completeness and correctness of their valuation work, by a new appraiser is encouraged to seek the advice of and review by experienced appraisal staff if that person is not sure of their value estimation results.

INDIVIDUAL VALUE REVIEW PROCEDURES

Field Review

The district's personnel periodically review their assigned real and 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 personal property at that facility. Properties assigned to contract appraisal firms are reviewed annually because changes also occur regularly at these facilities.

Many times during hearing, 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 are not always utilized in this county. Any new construction is noted and the

Appraisal Manual

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 contract appraisal firms must advise the district of any characteristics that would affect the value of the land associated with that assigned facility.

Office Review

All properties not subjected to field review are reviewed in the office by the district appraiser assigned to particular real or personal properties. The office review relies on historical information in the real or 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 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 District schedules.

MCAD personnel reviews renditions submitted and compares them to previous years' information. Any changes that have been observed but not listed are confirmed by calling the property owner. If the property owner provides cost and year of acquisition the amounts are depreciated according to the district's depreciation schedule. If a good faith estimate is provided the district uses that amount unless there is a substantial change from last year or district personnel have reason to believe the estimate is incorrect; in that case, the property owner is contacted to verify information.

PERFORMANCE TESTS

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.

Appraisal Manual

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 district perform such an analysis.

If a jurisdiction challenge is received by MCAD on an industrial category of properties, the 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 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 property comparison.

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MILLS CENTRAL APPRAISAL DISTRICT

2020 DEPRECIATION SCHEDULE

EFFECTIVE		LIFE EXPECTANCY IN YEARS								
AGE	YEAR	3	5	8	10	12	14	15	20	25
1	2019	72%	84%	90%	92%	93%	94%	95%	96%	97%
2	2018	44%	68%	80%	84%	87%	89%	89%	92%	94%
3	2017	16%	51%	70%	76%	80%	83%	84%	88%	90%
4	2016	10%	36%	61%	69%	74%	78%	79%	84%	87%
5	2015	10%	21%	52%	61%	68%	72%	74%	81%	84%
6	2014	10%	10%	42%	54%	62%	67%	69%	77%	81%
7	2013	10%	10%	33%	47%	56%	62%	64%	73%	78%
8	2012	10%	10%	25%	40%	50%	57%	60%	70%	76%
9	2011	10%	10%	16%	33%	44%	52%	55%	67%	73%
10	2010	10%	10%	12%	27%	39%	48%	51%	63%	70%
11	2009	10%	10%	12%	21%	34%	44%	47%	60%	68%
12	2008	10%	10%	12%	15%	29%	39%	44%	58%	66%
13	2007	10%	10%	12%	14%	25%	35%	40%	55%	63%
14	2006	10%	10%	12%	14%	20%	32%	36%	52%	61%
15	2005	10%	10%	12%	14%	16%	28%	32%	49%	59%
16	2004	10%	10%	12%	14%	14%	24%	29%	47%	57%
17	2003	10%	10%	12%	14%	14%	20%	25%	44%	55%
18	2002	10%	10%	12%	14%	14%	16%	22%	41%	52%
19	2001	10%	10%	12%	14%	14%	15%	18%	39%	50%
20	2000	10%	10%	12%	14%	14%	15%	15%	36%	48%
21	1999	10%	10%	12%	14%	14%	15%	15%	34%	46%
22	1998	10%	10%	12%	14%	14%	15%	15%	31%	44%
23	1997	10%	10%	12%	14%	14%	15%	15%	29%	42%
24	1996	10%	10%	12%	14%	14%	15%	15%	26%	40%
25	1995	10%	10%	12%	14%	14%	15%	15%	24%	39%
26	1994	10%	10%	12%	14%	14%	15%	15%	22%	37%
27	1993	10%	10%	12%	14%	14%	15%	15%	20%	35%
28	1992	10%	10%	12%	14%	14%	15%	15%	20%	33%
29	1991	10%	10%	12%	14%	14%	15%	15%	20%	32%
30	1990	10%	10%	12%	14%	14%	15%	15%	20%	30%
31	1989	10%	10%	12%	14%	14%	15%	15%	20%	28%
32	1988	10%	10%	12%	14%	14%	15%	15%	20%	27%
33+	1985 & prior	10%	10%	12%	14%	14%	15%	15%	20%	25%

NORMAL YEAR LIFE

COMPUTER EQ
3 YR LIFE

COMMUNICATION EQ
8 YR LIFE

FURN., FIXT., & EQPMT.
10 YR LIFE

HEAVY EQPMT
12 YR LIFE

ASSETS ARE APPRAISED ON AN INDIVIDUAL BASIS- NORMAL YEAR LIFE MAY NOT APPLY IN ALL CASES

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