



NAVARRO CENTRAL APPRAISAL DISTRICT
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2019-2020
Reappraisal Plan
Navarro Central Appraisal District

Adopted by the Board of Directors on July 11, 2018 as required by
Texas Property Tax Code Section 6.05 (i)

NCAD Board of Directors
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**NAVARRO CENTRAL APPRAISAL DISTRICT
2019-2020 REAPPRAISAL PLAN**

INTRODUCTION

GENERAL OVERVIEW OF TAX CODE REQUIREMENT

Passage of Senate Bill 1652 in 2005 amended the Property Tax Code to require each Appraisal District to prepare a biennial reappraisal plan. The following details the Tax Code requirements:

The Written Plan

Section 6.05, Property Tax Code, is amended by adding Subsection (i) to read as follows:

- (i) To ensure adherence with generally accepted appraisal practices, the board of directors of an appraisal district shall develop biennially a written plan for the periodic reappraisal of all property within the boundaries of the district according to the requirements of Section 25.18 and shall hold a public hearing to consider the proposed plan. Not later than the 10th day before the date of the hearing, the secretary of the board shall deliver to the presiding officer of the governing body of each taxing unit participating in the district a written notice of the date, time and place of the hearing. Not later than September 15 of each even numbered year, the board shall complete its hearing, make any amendments, and by resolution finally approve the plan. Copies of the approved plan shall be distributed to the presiding officer of the governing body of each taxing unit participating in the district and to the comptroller within 60 days of the approval date.

Plan for Periodic Reappraisal

Subsections (a) and (b), Section 25.18, Property Tax Code, are amended to read as follows:

- (a) Each appraisal office shall implement the plan for periodic reappraisal of property approved by the board of directors under Section 6.05(i).
- (b) The plan shall provide for the following reappraisal activities for all real and personal property in the district at least once every three years:

- (1) Identifying properties to be appraised through physical inspection or by other reliable means of identification, including deeds or other legal documentation, aerial photographs, land-based photographs, surveys, maps, and property sketches;
- (2) Identifying and updating relevant characteristics of each property in the appraisal records;
- (3) Defining market areas in the district;
- (4) Identifying property characteristics that affect property value in each market area, including:
 - (a) The location and market area of the property;
 - (b) Physical attributes of the property, such as size, age, and condition;
 - (c) Legal and economic attributes; and
 - (d) Easements, covenants, leases, reservations, contracts, declarations, special assessments; ordinances, or legal restrictions;
- (5) Developing an appraisal model that reflects the relationship among the property characteristics affecting value in each market area and determines the contribution of individual property characteristics;
- (6) Applying the conclusions reflected in the model to the characteristics of the properties being appraised; and
- (7) Reviewing the appraisal results to determine value.

Navarro Central Appraisal District, hereafter referred to as NCAD, is charged with the responsibility of appraising property in the district for ad valorem taxes on property in the district. Those entities are:

City of Barry
 City of Blooming Grove
 City of Corsicana
 City of Dawson
 City of Emhouse
 City of Frost
 City of Goodlow
 City of Kerens
 City of Rice
 City of Richland
 City of Streetman
 Fairfield Hospital District
 Blooming Grove ISD
 Bynum ISD
 Corsicana ISD
 Dawson ISD
 Ennis ISD

Fairfield ISD
Frost ISD
Hubbard ISD
Kerens ISD
Mildred ISD
Rice ISD
Wortham ISD
Navarro County
Navarro College
Navarro County Emergency Service District #1
Navarro County Flood Control
Navarro County Road and Bridge
Hill College
Henderson County Levee Improvement District

NCAD will set goals and implement the ten steps for each reappraisal.

- 1) Performance Analysis
- 2) Reappraisal Decision
- 3) Analysis of Available Resources
- 4) Planning and Organization
- 5) Mass Appraisal System
- 6) Pilot Study
- 7) Data Collection
- 8) Valuation
- 9) The Mass Appraisal Report
- 10) Value Defense

PERFORMANCE ANALYSIS

Using market analysis of comparable sales, locally tested cost data and income analysis, valuation models will be specified and calibrated in compliance with supplemental standards from the IAAO and USPAP. The calculated values will be tested for accuracy and uniformity using ratio studies.

Performance Analysis is determined using the equalized values from the previous tax year with the ratio studies to determine the appraisal accuracy and appraisal uniformity overall and by market area within property reporting categories. Ratio studies will be conducted in compliance with the current *Standard on Ratio Studies* of the International Association of Assessing Officers (IAAO).

A performance analysis determines whether values are equitable and consistent with the market. The primary tool for analysis is the ratio study used in accordance with IAAO Standard on Ratio Studies. The estimates of appraisal level will be measured in mean, median, and weighted mean. The primary measure of appraisal accuracy and uniformity will be calculated by the coefficient of dispersion (COD), which represents the average percent deviation from the median ratio. This analysis will be used to develop the starting point for establishing the accuracy and uniformity of appraisal performance.

NCAD will run ratio reports on categories of properties within the district to determine if NCAD values are consistent with the market periodically.

REAPPRAISAL DECISION

As required by Section 25.18 of the Property Tax Code, NCAD will provide for the reappraisal of all real and personal property located within the district. It will be the plan of NCAD to reappraise properties annually, although physical inspections of real properties will be made at least once every three years.

ANALYSIS OF AVAILABLE RESOURCES

For reappraisal purposes, NCAD will use its current staff for appraising real and personal properties. All district employees will strive to assist property owners, taxing entities and the general public with information the district is able to provide. NCAD will contract with **Capitol Appraisal Group, Inc.** for the appraisal of oil and gas properties, public utilities, railroads, pipelines, and other industrial properties.

Each year the chief appraiser will prepare a proposed operating budget to provide funds for a reappraisal. The board of directors will hold a public hearing and approve a budget before September 15th of each year. NCAD will work within the budget as approved by the board of directors.

The computer assisted mass appraisal (CAMA) system and CAMA Cloud used by NCAD will be the assessment package supported by *Harris Govern True Automation, Inc.* For the geographic information system (GIS), NCAD is currently using Micro Station Software and ARC Map by *ESRI*. NCAD will continue to use aerial photos and maps of the district using *Pictometry*.

PLANNING AND ORGANIZATION

NCAD will use the following scheduled months for the 2019-2020 reappraisal.

RESIDENTIAL CALENDAR OF EVENTS

	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
Land Analysis												
Neighborhood Delineation												
Re-inspection/Sales Validation												
Sales Ratio Analysis												
New Construction Discovery												
New Construction Value Review												

Appeal of Property Value Study												
New Subdivisions												
Split-out Combinations												
Jurisdiction Estimates												
Prior Year Correction Hearings												
Prior Year Corrections												
Field Checks												
Current Year Hearings												

COMMERCIAL/INDUSTRIAL CALENDAR OF EVENTS

	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
Land Analysis												
Re-inspection												
Income and Expense Data												
Valuation												
Sales Analysis												
Permit Research												
New Construction/Discovery												
New Construction Value Review												
Appeal of Property Value Study												
Split-outs/Combinations												
Sales Verification												
Prior Year Correction Hearings												
Prior Year Corrections												
Current Year Hearings												

PERSONAL PROPERTY CALENDAR OF EVENTS

	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
Develop and Test Schedules												
Rendition Review/Finalize Values												
Prior Year Correction Years												
Prior Year Corrections												
Current Year Hearings												

MASS APPRAISAL SYSTEM DEVELOPMENT

Properties scheduled for reappraisal will be identified by a physical inspection or by other reliable means of identification, including deeds or other legal documentation, aerial photographs, orthographic imagery (*Pictometry*), land based photographs, surveys, maps, building permits, utility hookups, septic tank permits, listing of commercial vehicles and renditions.

NCAD will strive to maximize the efficiency of the field review by sorting properties to an assignment group which is uploaded to CAMA Cloud and then downloaded to a field device. During field reviews of property, the appraiser will update the relevant characteristics of each property and will look for changes in the condition of the property, i.e. fire damage, remodeling, additions, demolitions or physical deterioration of the improvements. As new improvements are discovered, they will be inspected, classified, and added to the appraisal records.

Real property market areas, stratified by property classification, will be tested for low or high sales ratios, and high coefficients of dispersion. Market areas that fail any or all of these tests will be reviewed. Field reviews will be scheduled to verify and correct property characteristics data. Additional sales data will be researched and verified in order to assess whether the market area is correctly defined and stratified.

Market areas are defined by the physical, economic, governmental and social forces that influence property values. The effects of these forces are used to identify, classify, and stratify or delineate similarly situated properties into smaller, more comparable and manageable subsets for valuation

purposes. Delineation can involve the physical drawing of neighborhood boundary lines on a map or, it can also involve statistical stratification based on characteristics. Uniform properties are delineated into valuation neighborhoods for residential property or economic class for commercial property. Because there are noticeable patterns of growth that characterize a neighborhood or market segment, appraisers will evaluate and redefine the neighborhood boundaries or market segments when necessary in order to ensure uniformity of property characteristics.

SPECIFIC AREAS OF REAPPRAISAL

The areas of Navarro County to be appraised in 2019 will be properties in the city, subdivision and abstracts in Dawson ISD. For 2020, NCAD will reappraise properties in Blooming Grove ISD and Hubbard ISD.

The areas of Navarro County to be appraised in 2019 in Corsicana City will be residential properties that are north of West 7th Avenue, west of Business 45, and west of Burlington Northern Railroad tracks, Northwood Blvd. and all of everything west. For 2020, NCAD will reappraise properties that are east of the Business 45 and east of Beaton and south of 7th Ave. and east of the Burlington Railroad tracks.

The areas of Navarro County to be appraised in 2019 will include all commercial real properties in Corsicana ISD, Rice ISD and all Business Personal Property. For 2020 NCAD will reappraise all commercial real properties in the Blooming Grove ISD, Dawson ISD, and Frost ISD, Kerens ISD, Mildred ISD, Fairfield ISD, Ennis ISD, and Bynum ISD. NCAD will also continue the maintenance of all business personal properties, additions of any new businesses and corrections as required.

The area of Navarro County to be appraised in 2019 will include subdivisions in Kerens ISD, Mildred ISD, and Fairfield ISD. The areas of Navarro County to be appraised in 2020 by NCAD will include abstracts in Kerens ISD located south of State Highway 31, and all abstracts in Mildred ISD and all abstracts in Fairfield ISD.

The areas of Navarro County to be appraised in 2019 by NCAD will be all of Ennis ISD properties, Corsicana ISD, outside of the City will be south of State Hwy 31, all properties in Wortham ISD. The areas for 2020 will include subdivisions in Corsicana ISD that are north of State Hwy 31 and all properties in Rice ISD.

NCAD will use sales data, income data and/or cost data to define market areas within the district. Additionally, NCAD will use *Marshall & Swift's* commercial estimator software and residential estimator book as needed for appraisal of commercial properties and residential properties.

NCAD will make an annual review of the various forms used by the districts i.e. exemption forms, agricultural application forms, renditions forms, appraisal notices etc. Forms and applications will be revised when necessary to conform to changes made by the State Comptroller's office. NCAD staff will provide general information and assistance regarding the information required on the forms and the filing deadlines for those applications.

PILOT STUDY

Once all data entry work is completed, properties will be recalculated in the CAMA system. We will compare NCAD appraisals to current market conditions, which will indicate the accuracy of appraisals. The results will be reviewed and indicated modifications will be made accordingly.

DATA COLLECTION

In the field inspection, appraisers will collect information on the improvements, including effective age, construction grade (classification of the improvement) and percent of depreciation (physical, functional or economic obsolescence).

Sales will be collected by multiple listing service (MLS), and renditions from property owners. Additional data will be collected by the sales questionnaire sent to new owners of property within the county. Information requested includes purchase date, sales price, the type of transfer, type of financing and if personal or other property is included in the sale.

Further data will be obtained by inspecting deeds, deeds of trust, building and demolition permits, mechanic's liens, closing statements, public records reports and realtor information.

PRODUCTION OF VALUES

The NCAD appraised values will be compared to prices paid for comparable properties in a market area, income valuation, and regional cost valuation. We will use existing appraisal classifications and adjust formulas, tables and schedules to reflect current market values. In accordance with IAAO and USPAP standards, these preliminary value calculations will be tested for accuracy and uniformity using ratio studies and further adjusted, if so indicated.

Defining market areas in the district: -Active market areas for Navarro County include the Richland-Chambers Lake area located in Kerens ISD, Mildred ISD, and Fairfield ISD. This includes residential and commercial properties. The City of Corsicana is defined as an active market area for residential, commercial, and industrial properties. Utilities, pipelines, and minerals represent an active market area for the entire county. Rural market areas are Blooming Grove ISD, Rice ISD, Frost ISD, Kerens ISD, and Dawson ISD. Market areas for residential and commercial properties are defined by the physical, economic, governmental, and social forces that affect value. These forces help to identify, class, and stratify or delineate similar properties into smaller, more comparable subsets for valuation purposes. Delineation can involve the physical drawing of neighborhood boundary lines on maps, or it can be a statistical separation based on attribute analysis. This statistical separation is also known as stratification. These homogeneous properties have been delineated into valuation neighborhoods for residential property or economic class for commercial property. Due to visible patterns of growth that characterize a neighborhood or market segment, neighborhood boundaries or market segments will be redefined when necessary to reflect those changes ensuring uniformity of property characteristics.

Developing an appraisal approach that reflects the relationship among property characteristics affecting value and determines the contribution of individual property characteristics: - Among the three approaches to value (market/sales, cost and income), residential properties are most commonly appraised using market data because sales prices of comparable properties are usually considered the best evidence of market value. This comparison models the behavior of the market by comparing the properties being appraised with comparable properties that have recently sold or for which offers to purchase have been made. Their sales prices will then be adjusted for differences from the subject and a market value for the subject is estimated from the adjusted sales price of comparable properties.

RESIDENTIAL REAL PROPERTY

The valuation process for residential property typically begins in September. Land analysis, sales outlier review, neighborhood sales analysis, and finalization of proposed estimates of value will occur from September through March.

Valuation Methods Used:

Sales Comparison Approach

As indicated in *Property Appraisal and Assessment Administration* (IAAO, 1990), in the absence of a sale of the subject, sales prices of comparable properties are usually considered the best evidence of market value. The sales comparison approach models the behavior of the market by comparing the properties being appraised with comparable properties that have recently sold or for which offers to purchase have been made. Their sales prices will then be adjusted for differences from the subject and a market value for the subject is estimated from the adjusted sales prices of comparable properties.

Cost Approach

NCAD will use a cost approach when valuing single-family and multi-family residential properties. A review and revision as needed of the base cost and additional residential cost schedules will be performed before each reappraisal year.

The district also uses the comparative unit method to develop the “base” cost of a structure. In this method the base would be the remaining difference (constant) after all additional components are determined by using the unit-in-place method. Table-driven cost factors, taken from *Marshall & Swift*, will be adjusted for local or regional construction and labor costs. When reliable data is available from the local market it will be used. The results of this comparison will be analyzed using several measures, including stratification by quality and review of estimated building costs, as well as land value to sales prices.

The focus on new cost (discussed above), may result in a pattern of under-appraisal of older properties and neighborhoods. This sometimes occurs because of limited data in our market required to accurately adjust depreciation tables. Ratio studies limited to sales of homes with depreciated RCNs may be used to determine the necessary adjustment to the base-cost to more accurately appraise the older

homes/neighborhoods. This enables efficient and more accurate direct equalization between neighborhoods, in effect providing for direct compensation of any appraisal inaccuracies in new construction on a neighborhood basis.

Neighborhood or Market Adjustment factors will be developed from appraisal statistics provided by ratio studies to ensure that estimated values reflect both the supply and demand side of the market. The following equation denotes the model used:

$$MV = [((RCN-D) + AV) * MA] + L$$

Where:

MV= Appraised or estimated market value

RCN= Replacement cost new of improvement(s)

MA= Market Area-specific adjustment factor

D= Accrued depreciation

AV= Additional improvement value

L= Land value

Market Area-specific adjustment factors are applied to account for local differences between defined areas. This appraisal phase is also known as direct equalization.

Residential land values are estimated based on market sales. Adjustments to land appraisals may be based on parcel size, shape, rights-of-way or easements, slope, drainage issues, and where necessary, economic obsolescence. Land values are calculated by any of the various units in place or, when data is insufficient to accurately determine the appropriate unit or unit values, by site value.

In saturated Market Areas (Neighborhoods) where there are insufficient vacant land sales available, market area specific adjustment factors for land are calculated based upon ratio studies. The appropriate land adjustment will be determined by calculating the MA required to achieve an appropriate land: total value or land: total sale price ratio. This model may be described in equation form as follows:

$$MV = ((RCN-D) + AV) + (L * MA)$$

After this has been completed the ratio study will then be used to determine whether an additional MA is required to adjust the improvement values to accomplish accurate appraisals. The model required to adjust both the improvement and land values may be described in the equation form as follows:

$$MV = [((RCN-D) + AV) * MA] + (L * MA)$$

The sales used to determine the market adjustment factor(s) will reflect the market influences and conditions only for the specified neighborhood, thus producing more representative and supportable values. The market adjustment factor(s) calculated for each updated neighborhood will be applied uniformly to all properties within a neighborhood and a second set of ratio studies will be generated that compares recent sale prices with the proposed market values for these sold properties. From this set of ratio studies, the analyst will judge the appraisal level and uniformity in both updated and non-updated neighborhoods.

Income Approach

The income approach is based on the principle that the value of an investment property reflects the quality and quantity of the income it is expected to generate over its life. In other words, value is the estimated present value of future benefits, namely income and proceeds from the sale of the property. The appraiser must estimate income from a property and capitalize the income into an estimate of current value.

The model used to estimate the present value of income expected in the future is represented by the following formulas known as IRV.

Value = Income/Rate or, Income = Rate x Value or, Rate = Income/Value

The income approach is most suitable for types of properties frequently purchased and held for the purpose of producing income, such as apartments, commercial buildings, and office buildings. It is not conducive to the valuation of single-family residential properties that are seldom rented, or where market demand factors such as personal preferences or location unduly influence the market.

INVENTORY RESIDENTIAL PROPERTY

Residential improved and vacant property, when qualified as an inventory, will be appraised in compliance with the Texas Property Tax Code, Section 23.12 (a).

In general, the district uses its land value estimates and the actual itemized construction, labor, and material costs, plus other soft or indirect costs to estimate market value as of the assessment date. The market values of improved inventory will be reviewed annually and inventory consideration will be eliminated when ownership transfers to the individual property owner.

Vacant residential inventory, when appropriate, will be valued using a discounted cash flow formula that considers value relative to the income or cash flow, the interest or discount rate, and the number of years the property is likely to be held. As with improved inventory, full market value will be applied once the vacant land is absorbed and ownership transfers for the purpose of residential construction.

COMMERCIAL REAL PROPERTY

All commercial properties including but not limited to retail properties, apartments, warehouses, medical offices, golf courses, office buildings and mobile home parks will be valued by the cost approach, the income approach, or the sales comparison approach as deemed most appropriate pursuant to Section 23.0101 of the Property Tax Code. Ratio studies will be performed to test the level and uniformity of appraisal within specific property use categories.

Valuation Methods Used:

Sales Comparison Approach

Although all three of the approaches to value are based on market data, the Sales Comparison Approach is most frequently referred to as the Market Approach. This approach is utilized not only as a primary method 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, will be obtained throughout the year in order to analyze relevant information, which is then used in all aspects of valuation. Sales of similarly improved properties can provide a basis for the depreciation schedules in the cost approach, rates and multipliers used in the income approach, and as a direct comparison in the sales comparison approach. Improved sales will also be used in ratio studies, which 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 in the cost, income and sales approaches, the cost and income models will be calibrated annually. The calibration results will be keyed to the schedules and models in the CAMA system for utilization on all commercial properties in the District.

Cost Approach

The cost approach to value will be applied using the comparative unit method. This methodology involves the use of national cost data estimating services as well as actual cost information on comparable properties whenever possible. Cost models are typically developed based on *Marshall & Swift Service* and cost tables developed from local construction indexes. Cost models include the use of replacement cost new (RCN) of all improvements. The “replacement cost” will be used because it values the cost of a property that is a utility equivalent of the property being appraised using current construction methods and materials. Such costing is contra to “reproduction cost”, which is defined as the cost to construct an exact duplicate of the property being appraised. Replacement cost new includes comparative base rates, per unit adjustments and lump sum adjustments. Time and location modifiers will be 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 estimating service is used as a primary basis for our cost models, local modifiers will be applied to adjust the base costs.

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

Income Approach

The income approach to value will be applied to those real properties that are typically viewed by market participants as “income producing”, which are bought and sold based on the property’s ability to produce income, 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. This is derived primarily from actual rent data furnished by property owners and local market study publications. This per unit rental rate multiplied by the number of units results in the estimate of potential gross rent.

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

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

Allowable expenses and expense ratio estimates will be 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 will be included in the expenses. A non-recoverable expense represents costs that the owner pays to lease rental space. Different expense ratios will be developed for different types of commercial property based on use. For instance, retail properties are most frequently leased on a triple-net basis, whereby the tenant is responsible for his pro-rata share of taxes, insurance and common area maintenance. In comparison, a multi-tenant office building is most often leased on a base year expense stop. This lease type stipulates that the owner is responsible for all expenses incurred during the first year of the lease. However, any amount in excess of the total per unit expenditure in the first year is the responsibility of the tenant. Under this scenario, the total operating expense in year one establishes the base rate. Any increase in expense over the base rate throughout the remainder of the lease term would be the responsibility of the tenant. As a result, expense ratios will be implemented based on the type of commercial property.

Another form of allowable expense is the replacement of short-lived items, such as roof or floor coverings, air conditioning or major mechanical equipment, or appliances requiring expenditures of large lump sums. When these capital expenditures are analyzed for consistency and adjusted, they may be applied on an annualized basis as stabilized expenses. When performed according to local market practices by commercial property type, these expenses when annualized are known as replacement reserves. Subtracting the allowable expenses from the effective gross income yields an estimate of net operating income or NOI.

Rates and multipliers will be 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. There are national and regional surveys produced by companies however, the market in Navarro County is particularly too small to be reflected in these national and regional surveys.

Capitalization analysis will be 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 will be derived from the market. Sales of improved properties from which actual income and expense data are obtained provide a very good indication of what a specific market participant is requiring from an investment at a specific point in time. Additionally, overall capitalization rates can be derived from the built-up method, band-of-investment, debt coverage ratio, and published sources for similar properties, as well as results from verified sales. The capitalization rates relate 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, as well as cap rate studies conducted by the district using verified sales and income information for that specific property.

Rent loss concessions will be made on specific properties with known 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 will be 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) and leasing expenses will be added to the rent loss estimate. A leasing expense necessary to bring the property to a stabilized level is also included in this adjustment. The total adjusted loss from these real property operations will be 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 will be deducted from the value estimate of the property at stabilized occupancy. A variation of this technique allows that for every year that the property's actual occupancy is less than stabilized occupancy a rent loss deduction may be estimated. Conversely, if a property were consistently above the stabilized occupancy level as of the appraisal date, the market would pay a premium for this situation. In this instance, the present value of the excess income over the stabilized level will be added to the value of the property.

AGRICULTURAL AND TIMBER LAND

The appraisal of agricultural or timber land is governed by Chapter 23 of the Property Tax Code. The appraised value of qualified open-space or timber land is determined on the basis of the category of land, using accepted income capitalization methods applied to average net to land. At this time, timber land is non typical for Navarro County.

Schedules for valuing qualified agricultural land have been developed for various agricultural uses and production. These schedules are reviewed annually and updated as needed using data from recognized sources such as the Texas Agricultural Extension Service as well as local landowners engaged in leasing land for agricultural use.

INDUSTRIAL REAL PROPERTY

Navarro County Appraisal District contracts with Capitol Appraisal Group, Inc. (CAGI) to appraise and defend the values of large industrial plants, producing oil and gas wells, tank farms, pipelines, railroad systems and related properties, oil field supply companies, drilling companies, public utilities including electric power generation and distribution companies, telephone companies, and other industrial properties annually.

Identifying properties to be appraised: - Appraisal of properties is limited to those indicated in the contract with the appraisal district, unless additionally requested by the appraisal district. Newly discovered properties will be discussed with the appraisal district to confirm they are to be appraised by Capitol Appraisal. Industrial properties are identified as part of the appraiser's physical inspection process each year and through submitted data by the property owner. The appraiser may also refer to legal documents, photography, and other descriptive items.

Identifying and updating relevant characteristics of each property in the appraisal records: - The appraiser identifies and updates relevant characteristics through the inspection process. Confidential rendition, assets lists and other confidential data also provide additional information. Subject property data is verified through previously existing records and through published reports.

Defining market areas in the district: - Market areas for industrial properties tend to be regional, national and sometimes international. Published information such as prices, financial analysis and investor services reports are used to help define market area.

Developing an appraisal approach that reflects the relationship among property characteristics affecting value and determines the contribution of individual property characteristics: - Among the three approaches to value (market, cost and income), industrial properties are most commonly appraised using replacement/reproduction cost new less depreciation models because of readily available cost information. If sufficient income or market data are available, those appraisal models may also be used.

Comparison and review: - The appraiser considers results that best address the individual characteristics of the subject property and that are based on the most reliable data when multiple models are used. Year to year property value changes for the subject property are examined using computer assisted statistical review. Periodic reassignment of properties among appraisers or the review of appraisals by a more experienced appraiser also contributes to the review process.

Valuation Methods Used:

Sales Comparison Approach

$$\frac{ASPCP}{U} = PU$$
$$PU \times SU = \text{Market Data Indicator of Value}$$

Where:

ASPCP = Adjusted Sales Price of Comparable Property

U = Unit of Comparison

PU = Price per Unit of Comparison

ASPU = Adjusted Sales Price per Unit of Comparison

SU = Subjects property number of Units of comparison

Cost Approach

$$RCN - PD - FO - EO = \text{Cost Indicator of Value}$$

Where:

RCN = Replacement or Reproduction Cost New

PD = Physical Depreciation

FO = Functional Obsolescence

EO = Economic Obsolescence

Income Approach

$$PGR - VCL - FE - VE = NOI$$
$$NOI/R = \text{Income indicator Value}$$

Where:

NOI = Net Operating Income

PGR = Potential Gross Rent

VCL = Vacancy and Collection Loss

FE = Fixed Expenses
VE = Variable Expenses
R = Discount Rate or Cost of Capital

INDUSTRIAL PERSONAL PROPERTY

Identifying properties to be appraised: - Appraisal of properties is limited to those indicated in the contract with the appraisal district, unless additionally requested by the appraisal district. Newly discovered properties will be discussed with the appraisal district to confirm they are to be appraised by Capitol Appraisal. Through inspection the appraiser identifies personal property to be appraised. The appraiser may also refer to other documents, both public and confidential, to assist in identification of these properties. Such documents might include but are not limited to the previous year's appraisal roll, vehicle listing services and private directories.

Identifying and updating relevant characteristics of each property in the appraisal records: - The appraiser identifies and updates relevant characteristics through the inspection process. Confidential rendition, assets lists and other confidential data also provide additional information. Subject property data is verified through previously existing records and through published reports.

Defining market areas in the district: - Market areas for industrial personal properties are generally either regional or national. Published price sources are used to help define market areas.

Developing an appraisal approach that reflects the relationship among property characteristics affecting value and determines the contribution of individual property characteristics: - Personal property is appraised using replacement/reproduction cost new less depreciation models. Income approach models are used when economic and/or subject property income is available, and a market data model is used when appropriate market sales information is available.

Comparison and review: - The appraiser reconciles multiple models by considering the model that best addresses the individual characteristics of the subject property. Year to year property value changes for the subject property are examined using computer assisted statistical review. Periodic reassignment of properties among appraisers or the review of appraisals by a more experienced appraiser also contributes to the review process.

Valuation Methods Used:

Sales Comparison Approach

$$\text{ASPCP/U} = \text{PU}$$
$$\text{PU} \times \text{SU} = \text{Market Data Indicator of Value}$$

Where:

ASPCP = Adjusted Sales Price of Comparable Property

U = Unit of Comparison

PU = Price per Unit of Comparison

ASPU = Adjusted Sales Price per Unit of Comparison

SU = Subjects property number of Units of comparison

Cost Approach

$$RCN - PD - FO - EO = \text{Cost Indicator of Value}$$

Where:

RCN = Replacement or Reproduction Cost New

PD = Physical Depreciation

FO = Functional Obsolescence

EO = Economic Obsolescence

Income Approach

$$PGR - VCL - FE - VE = NOI$$
$$NOI/R = \text{Income indicator Value}$$

Where:

NOI = Net Operating Income

PGR = Potential Gross Rent

VCL = Vacancy and Collection Loss

FE = Fixed Expenses

VE = Variable Expenses

R = Discount Rate or Cost of Capital

UTILITY, RAILROAD AND PIPELINE PROPERTY

Identifying properties to be appraised: - Appraisal of properties is limited to those indicated in the contract with the appraisal district, unless additionally requested by the appraisal district. Newly discovered properties will be discussed with the appraisal district to confirm they are to be appraised by Capitol Appraisal. Utility, railroad and pipeline properties that are susceptible to inspection are identified by inspection. The appraiser may also refer to other documents, both public and confidential to assist in identification of these properties. Due to the varied nature of utility, railroad, and pipeline properties, there is no standard data collection form or manual. New permitting documents on record with the Railroad Commission of Texas provide a source to identify potential new pipeline projects but does not provide indication if the project was actually started, completed, or a distinct location of the proposed project. Every effort is made to discover new utility, railroad, and pipeline properties through personal observation combined with permitting documents.

Identifying and updating relevant characteristics of each property in the appraisal records: - The appraiser identifies and updates relevant characteristics through the inspection process. Confidential rendition, assets lists and other confidential data also provide additional information. Subject property data is verified through previously existing records and through published reports.

Defining market areas in the district: - Market areas for utility, railroad and pipeline property tend to be regional or national in scope. Financial analyst and investor services reports are used to help define market areas.

Developing an appraisal approach that reflects the relationship among property characteristics affecting value and determines the contribution of individual property characteristics: - For all three types of

property, the appraiser must first form an opinion of highest and best use. Among the three approaches to value (cost, income and market), pipeline value is calculated using replacement/reproduction cost new less depreciation model. In addition to the RCNLD indicator, a unit value model may also be used if appropriate data are available. Utility and railroad property are appraised in a manner similar to pipeline except that the RCNLD model is not used. Personal property is appraised using replacement/reproduction cost new less depreciation models. Income approach models are used when economic and/or subject property income is available, and a market data model is used when appropriate market sales information is available.

Comparison and review: - The appraiser considers results that best address the individual characteristics of the subject property when multiple models are examined using computer-assisted statistical review. Periodic reassignment of properties among appraisers or the review of appraisals by a more experienced appraiser also contributes to the review process. These types of property are also subject to review by the property Tax Division of the Texas Comptroller's Office through their annual Property Value Study.

Valuation Methods Used:

RCNLD Approach

$$\text{RCN} - \text{PD} - \text{FO} - \text{EO} = \text{RCNLD Indicator of Value}$$

Where:

RCN = Replacement or Reproduction Cost New

PD = Physical Depreciation

FO = Functional Obsolescence

EO = Economic Obsolescence

Unit Cost Approach

$$\text{OC} - \text{AD} - \text{EO} = \text{Unit Cost Approach Indicator of Value}$$

Where:

OC = Original Cost

AD = Allowed Depreciation

EO = Economic Obsolescence

Unit Income Approach

$$\text{PGR} - \text{VCL} - \text{FE} - \text{VE} = \text{NOI}$$
$$\text{NOI/R} = \text{Income indicator Value}$$

Where:

NOI = Net Operating Income

PGR = Potential Gross Rent

VCL = Vacancy and Collection Loss

FE = Fixed Expenses

VE = Variable Expenses

R = Discount Rate or Cost of Capital

Stock and Debt Approach

$$\text{MVE} + \text{MVD} = \text{Market Value of Assets}$$

Where:

MVE = Market Value Equity

MVD = Market Value of Debt

OIL AND GAS PROPERTY

Identification of new property and its situs: - As subsurface mineral properties lie within the earth, they cannot be physically identified by inspection like other real property. However, the inability to directly inspect does not appreciably affect the ability to identify and appraise these properties. To identify new properties, Capitol Appraisal Group, Inc (CAGI) obtains monthly oil and gas lease information from the Railroad Commission of Texas (RRC) to compare against oil and gas properties already identified. The situs of new properties is determined using plats and W-2/G-1 records from the RRC as well as CAGI's in-house map resources.

Identifying and updating relevant characteristics of all oil and gas properties to be appraised - Relevant characteristics necessary to estimate value of remaining oil or gas reserves are production volume and pattern, product prices, expenses borne by the operator of the property, and the rate at which the anticipated future income should be discounted to incorporate future risk. CAGI obtains information to update these characteristics annually from regulatory agencies such as the RRC, the Comptroller of Public Accounts, submissions from property owners and operators, as well as from published investment reports, licensed data services, service for fee organizations and through comparable properties, when available.

Defining market areas in the district and identifying property characteristics that affect property value in each market area - Oil and gas markets are regional, national and international. Therefore, they respond to market forces beyond defined market boundaries as observed among more typical real properties.

Developing an appraisal approach that best reflects the relationship among property characteristics affecting value and best determines the contribution of individual property characteristics - Among the three approaches to value (cost, income, and market), the income approach to value is most commonly used in the oil and gas industry. Through use of the discounted cash flow technique in particular, the appraiser is able to bring together relevant characteristics of production volume and pattern, product prices, operating expenses and discount rate to determine an estimate of appraised value of an oil or gas property.

Comparison and review - Use of the income approach is the first step in determining an estimate of market value. After that, the appraiser reviews the estimated market value compared to its previous certified value and also compares it to industry expected payouts and income indicators. The appraiser examines the model's value with its previous year's actual income, expecting value to typically vary within a range of 2-5 times actual annual income, provided all appropriate income factors have been correctly identified. Finally, periodic reassignment of properties among appraisers and review of appraisals by a more experienced appraiser further expand the review process.

Valuation Methods Used:

Discounted Cash Flow

The income method of Appraisal, as described in Section 23.012 of the Texas Property Tax Code, is the principle appraisal method used. The Market Data Comparison Method of Appraisal, PTC (Section 23.013) and the Cost Method of Appraisal, PTC (Section 23.011) are considered. The DCF method is versatile and widely used to appraise income producing property. An appraiser using DCF first projects an anticipated net income for each year of the property's remaining economic life. Each annual cash flow is discounted to present value, and then all the present values are added to obtain the total market value of the real property interest being appraised.

$$PV = CF_1 \times (PWF_1) + CF_2 \times (PWF_2) + \dots CF_n \times (PWF_n)$$

Where:

PV = Present Value

CF = Cash Flow or Income

PWF = End of Period Present Worth Factor, equals $1/((1+i)^n)$

i = Discount Rate

n = Period for Present Worth Factor Being Calculated

The three acceptable techniques for estimating discount rates are:

1. Market Surveys
2. Oil and Gas Sales Analysis
3. Weighted Average Cost of Capital (WACC), also known as Band of Investment"

To estimate the present value (PV), an estimate of the income (cash flow) to be received in each period is necessary. The number of periods, n, (usually years) used in the analysis is determined by the number of years that the mineral property is expected to produce a positive net income.

There are many variations on the DCF formula. The formulas vary based on the time the money is received, i.e. continuously, beginning of period, middle of period or end of period. The period may be continuous, daily, monthly, quarterly, bi-annual or annual. Many oil properties are evaluated using an annual mid-period discounting variation of the DCF formula. The appropriate present worth factor for mid-year DCF analysis is:

$$PWF_{MY} = 1/((1+i)^{(n-.5)})$$

Where:

PWF_{MY} = Mid - Year Present Worth Factor

THE MASS APPRAISAL REPORT

NCAD's chief appraiser will prepare a summary appraisal report each year in September after the appeals process. The report will cover the scope of work completed as outlined by the appraisal plan.

The chief appraiser will sign the report for certification, as required by Standards Rule 6-8 of USPAP.

VALUE DEFENSE

NCAD staff will handle informal appeals filed by property owners in an effort to explain the appraisal process and how the value of the property has been derived. NCAD staff will also verify that all allowable exemptions and special appraisals are being applied. This is also an opportunity for property owners to show evidence or bring information to the District that may affect the value, which at the time, was unknown to the appraiser.

If a settlement cannot be reached, a hearing will be scheduled for the property owner to meet before the Appraisal Review Board. An information packet will be mailed to the property owner/agent notifying them of the date, time and place of the hearing. NCAD will provide the taxpayer a copy of the ARB Hearing Rules & Procedures and a copy of the Taxpayers Rights & Remedies. If requested, the protester is provided with the evidence NCAD intends to use at the hearing. NCAD realizes the burden of proof lies with the district to prove the property's value and will defend such values at the ARB hearings.

NCAD STAFF

Karen Morris, RPA, RTA, CTA, CCA is the District's Chief Appraiser. Mrs. Morris is the Chief Administrative Officer of the Appraisal District office. Statutory responsibilities include: discovering, listing and appraising all taxable property within the Appraisal District; determining exemption and special use requests; organizing periodic reappraisals; and notifying taxpayers and taxing units of matters that affect property values; and all financial budgets and reporting to the Board of Directors. The Chief Appraiser is also responsible for compliance issues relating to legislative updates for the District.

Todd Welch, Class III, Field Appraiser for the District. He is responsible for discovering, listing and appraising all taxable property and coordinating the field review of real properties. This includes the responsibility for collecting data to classify land and improvements according to the district's CAMA system. He will also verify the qualification of parcels for open-space and wildlife management. He will gather sales information to analyze and develop cost schedules and make recommendations to the Chief Appraiser of any adjustments for this area. He will coordinate with staff on hearings during equalization phase of the tax year and prepare a value defense for the appraisal district. Mr. Welch reports directly to the Chief Appraiser.

Leroy Pardue, RPA, He will be responsible for collecting and/or updating data, classify commercial properties and improvements. As a business personal property appraiser he will mail, receive and review renditions submitted by business owners or their agents, perform inspections as needed to verify rendition statements and update depreciation tables. He will also be responsible for photographing and cataloging commercial properties. He will work with property owners and/or agents as appropriate during informal and formal protest. He will prepare defense of value to be heard before the Appraisal Review Board as required. He will coordinate with staff to notify Capitol Appraisal Group when industrial properties ownership occurs and segregate Industrial business personal property renditions for administrative staff to forward to CAGI. Mr. Pardue reports directly to the Chief Appraiser.

Hector Castaneda, RPA, Field Appraiser for the District. He is responsible for appraising and field reviews of real properties. In performing field reviews, he collects data to classify land and

improvements according to the district's CAMA system. He will gather information and analyze cost schedules and make recommendations to the Chief Appraiser of any adjustments for this area. He will gather and enter sales information that is supplied or reported to the district. Mr. Castaneda is also responsible for calculating the productivity valuations. He will also work with the property owners during informal and formal protests. Mr. Castaneda reports directly to the Chief Appraiser.

Tom Dally, RPA, Field Appraiser for the District. Mr. Dally will be responsible for appraising properties in NCAD. In performing field reviews, he collects data to classify land and improvements according to the district's CAMA system. He will gather information and analyze cost schedules and make recommendations to the Chief Appraiser of any adjustments for this area. Mr. Dally will gather and enter sales information that is supplied or reported to the district. He will also work with the property owners during informal and formal protests. Mr. Dally reports directly to the Chief Appraiser.

Joe McClure, Class III, Field Appraiser for the District. Mr. McClure will be responsible for appraising and field reviews of real properties in Navarro CAD. In performing field reviews, he collects data to classify land and improvements according to the district's CAMA system. He will gather information and analyze cost schedules and make recommendations to the Chief Appraiser of any adjustments for this area. Mr. McClure will gather and enter sales information that is supplied or reported to the district. He will also work with the property owners during informal and formal protests. Mr. McClure reports directly to the Chief Appraiser.

Jason Matous, GIS Mapper, Mr. Matous will be responsible for the maintenance of the district's mapping system and will update ownership changes as they occur as indicated by recorded deeds. He is also responsible for performing research regarding ownership issues. Additionally, Mr. Matous will aid appraisers in organizing maps needed for field work by using Micro Station Software and ARC Map by ESRI, as well as *Pictometry*. Mr. Matous prepares the splits/mergers of properties within the District that are sold. Mr. Matous reports directly to the Director of Business Services.

Linda Dunbar, Systems Administrator, Mrs. Dunbar is responsible for all data maintenance, procurement and preparation for state and local reporting. She is responsible for delivery of all information to all taxing entities. She also assists property owners and the general public with information the district is able to provide. She applies abatements to industrial accounts, works closely with the Cities to apply TIF exemptions, and works with the Appraisal Review Board during the protest period. She assists the Chief Appraiser with the certification process. Mrs. Dunbar reports directly to the Director of Business Services.

Michelle Evans, Exemption Specialist, Mrs. Evans is responsible for reviewing and administering all exemptions. She also assists the Systems Administrator with daily operations of the district. She is responsible for implanting sales data from Multiple Listing Service and all sales resources into the Navarro Central Appraisal District CAMA System. She also performs clerical work as needed by the appraisers. She is responsible for the scheduling of all hearings related to the Appraisal Review Board. Mrs. Evans reports directly to the Director of Business Services.

Kelly Lawhon, Director of Business Services, Level III, Mrs. Lawhon assists with daily operations of the district. She is Administrative Assistant and is responsible for accounts payable and receivables, ordering office supplies, handling insurance and retirement information, and all board agendas and minutes. Also, she assists property owners, taxing entities and the general public with information the district is able to provide. Mrs. Lawhon is also working towards her RPA designation. Mrs. Lawhon

supervises 5 employees in the Mapping and Clerical departments. Mrs. Lawhon reports directly to the Chief Appraiser.

Tracey Frederick, Customer Service Representative, Mrs. Frederick assists with the daily operations of the district. She assists property owners and the general public with information the district is able to provide. She is also responsible for requesting and maintaining mortgage codes for taxpayer accounts. She is responsible for receiving, entering and distributing sales letters, mobile home certificates, building permits and all exemption applications. She is responsible for maintaining up to date address research for the appraisal roll. Mrs. Frederick reports directly to the Director of Business Services.

Stephanie Cates, Customer Service. Level III, Ms. Cates assists property owners and the general public with information the district is able to provide. She assists with the daily operations of the district. She is training for responsibilities of data maintenance, procurement and preparation for state and local reporting. She is also training for delivery of all information to the taxing entities. She coordinates with the ARB Coordinator in scheduling protests. Ms. Cates is also working towards her RPA designation. Ms. Cates reports directly to the Director of Business Services.

Board of Directors, The Board of Directors' responsibilities includes oversight of the Chief Appraiser and entire District, as well as reviewing and approving the annual budget, including the monthly financial accounting reports. They also appoint the Appraisal Review Board Members. The Board of Directors has the task of approving the district's contracts. The Board of Directors also reviews all litigation issues concerning the district with the Chief Appraiser. The Board is comprised of five members and the County tax assessor-collector. The directors have no authority to set value or appraisal methods.

Appraisal Review Board- We currently have five members serving two year staggered terms. They attend training seminars hosted by the Property Tax Assistance Division of the Comptroller's Office. Their experience varies from legal backgrounds, lending, administrative and planning and construction. They meet all guidelines in Section 6.41 of the Property Tax Code.

Agricultural Advisory Board- Currently the District has seven members of the agricultural community which meet the guidelines of Section 6.12 of the Property Tax Code. They meet once per year to discuss valuation and use of land that may be designated for agricultural use.