

Preface

The requirements for the assessment of real property for the purposes of property taxation are found in Nebraska law. The Constitution of Nebraska requires that “taxes shall be levied by valuation uniformly and proportionately upon all real property and franchises as defined by the Legislature except as otherwise provided in or permitted by this Constitution.” Neb. Const. art. VIII, § 1 (1). The uniform standard for the assessed value of real property for tax purposes is actual value, which is defined by law as “the market value of real property in the ordinary course of trade.” Neb. Rev. Stat. § 77-112 (2009). The assessment level for all real property, except agricultural land and horticultural land, is one hundred percent of actual value. The assessment level for agricultural land and horticultural land, hereinafter referred to as agricultural land, is seventy-five percent of its actual value. § 77-201(1) and (2) (2009). More importantly, for purposes of equalization, similar properties must be assessed at the same proportion of actual value when compared to each other. Achieving the constitutional requirement of proportionality ultimately ensures the balance equity in the imposition of the property tax by local units of government on each parcel of real property.

The assessment process, implemented under the authority of the county assessor, seeks to value similarly classed properties at the same proportion to actual value. This is not a precise mathematical process, but instead depends on the judgment of the county assessor, based on his or her analysis of relevant factors that affect the actual value of real property. Nebraska law provides ranges of acceptable levels of value that must be met to achieve the uniform and proportionate valuation of classes and subclasses of real property in each county. Neb. Rev. Stat. § 77-5023 (2009) requires that all classes of real property, except agricultural land, be assessed at one hundred percent of actual value; the class of agricultural land be assessed at seventy-five percent of actual value; and the class of agricultural land receiving special valuation be assessed at 75 percent of its special value. Recognizing the potential bias/error in the estimate, § 77-5023(2) provides an acceptable range of the statistical calculation of 92 to 100% for all non-agricultural real estate and the level of 69 to 75 for all agricultural land.

To ensure that the classes of real property are assessed at these required levels of actual value, the Department of Revenue, Property Assessment Division (Division) is required to analyze and measure the assessment performance of each county. This includes the responsibility of the Property Tax Administrator to prepare statistical and narrative reports for the Tax Equalization and Review Commission (Commission) and the county assessors. Neb. Rev. Stat. § 77-5027 (2011) provides:

. . . (2) ... the Property Tax Administrator shall prepare and deliver to the commission and to each county assessor his or her annual reports and opinions ...

(3) The annual reports and opinions of the Property Tax Administrator shall contain statistical and narrative reports informing the commission of the level of value and the quality of assessment of the classes and subclasses of real property within the county and a certification of the opinion of the Property Tax Administrator regarding the level of value and quality of assessment of the classes and subclasses of real property in the county.

- (4) In addition to an opinion of level of value and quality of assessment in the county, the Property Tax Administrator may make nonbinding recommendations for consideration by the commission. . . .

The narrative and statistical reports contained in the Reports and Opinions of the Property Tax Administrator (R&O) provide an analysis of the assessment process implemented in each county to reach the levels of value and quality of assessment required by Nebraska law. The Property Tax Administrator's opinion of level of value and quality of assessment in each county is a conclusion based upon all the data provided by the county assessor and gathered by the Division regarding the assessment activities during the preceding year. The measurement of assessment compliance, in terms of the concepts of actual value and uniformity and proportionality mandated by Nebraska law, requires both statistical and narrative analysis.

The Division is required by Neb. Rev. Stat. § 77-1327 (2011), to develop and maintain a state-wide sales file that contains all arm's-length transactions. From this sales file the Division prepares an assessment sales ratio study in compliance with acceptable mass appraisal standards. The assessment sales ratio study is a mass appraisal performance evaluation tool that is used to begin the county analysis. From the sales file, the Division prepares a statistical analysis from a selected set of observations, known as sales, from which inferences about the population, known as a class or subclass of real property, may be drawn. The statistical reports contained in the R&O to the extent practical are developed in compliance with standards developed by the International Association of Assessing Officers.

A narrative analysis of assessment practices in each county is necessary to give proper context to the statistical inferences from the assessment sales ratio study. There may be instances when the analysis of assessment practices outweighs or limits the reliability of the statistical inferences of central tendency or quality measures. This may require an opinion of the level of value that is not identical to the result of the statistical calculation. The Property Tax Administrator's goal is to provide statistical and narrative analysis of the assessment level and practices to the Commission, providing the Commission with the most complete picture possible of the true level of value and quality of assessment in each county.

In analyzing the county level of value and quality of assessment, if necessary, the Property Tax Administrator may use sales of comparable real property from market areas that are similar to the county being analyzed. The sales that are used may also be from another county. Neb. Rev. Stat. § 77-5027(5) (2011). This process allows for the borrowing of sales to use as indicators of the level of value and the quality of assessment in the county being analyzed.

The Property Tax Administrator's opinions of level of value and quality of assessment are stated as a single numeric representation for level of value and a simple judgment regarding the quality of assessment practices. Based on the information collected in developing this report, the Property Tax Administrator may feel further recommendations must be stated for a county to assist the Commission in determining the level of value and quality of assessment within a county. These opinions are made only after considering all narrative and statistical analysis

provided by the county assessor and developed by the Division. An evaluation of these opinions must only be made after considering all other information provided in the R&O.

Finally, after reviewing all of the information available to the Property Tax Administrator regarding the level and quality of assessment for classes and subclasses of real property in each county, the Property Tax Administrator, pursuant to Neb. Rev. Stat. § 77-5027(4) (2011), may make nonbinding recommendations for adjustments to the level of value for classes and subclasses of real property.

Purpose Statements

Commission Summary

The Commission Summary displays essential statistical information from other reports contained in the R&O. It is intended to provide an overview for the Commission, and is not intended as a substitute for the contents of the R&O.

Opinions of the Property Tax Administrator

The PTA Opinions contain the Property Tax Administrator's opinion of the level of value and quality of assessment for each class of property in the county. Also contains the nonbinding recommendation of the Property Tax Administrator, if any. These opinions are arrived at based upon the data provided by the county assessor, and the assessment activity in the county that was gathered by the Division.

Residential, Commercial or Agricultural or Special Valuation Reports Section

The Reports Section contains the statistical reports prepared by the Division pursuant to Neb. Rev. Stat. § 77-1327(3) (2011) and to the extent practical, the *Standard on Ratio Studies*, International Association of Assessing Officers, (2010). These statistical reports contain the numerator of the assessment sales ratio which reflects the 2012 assessed valuation of the property in the sales file as of the 2012 abstract filing date. These statistical reports are the outputs of the assessment sales ratio study of the county by the Division.

The draft statistical reports are available anytime throughout the year through the Assessor Assistant, in a PDF format, or by printed copy upon specific request. The purpose of the Draft Statistical Reports is to provide the statistical indicators of the sales in the sales rosters that are available to the county anytime throughout the year through the state sales file.

All statistical reports are prepared using the query process described in the calculations described later in this exhibit.

The Assessment Survey is also contained within the Reports Section. The survey documents the 2012 assessment actions taken to address the three classes of real property in the county.

Correlation Section

The Correlation Section contains a narrative analysis of the assessment actions and statistical results which may influence the determination of the level of value and quality of assessment for the classes and subclasses real property. This section is divided into three parts: Residential Real Property; Commercial Real Property; and, Agricultural Land. All information for a class of real property is grouped together to provide a thorough analysis of the level of value and quality of assessment for the class of real property.

Each part of the Correlation Section contains the following sub-parts:

- A. Correlation
- B. Analysis of Sales Verification
- C. Measure of Central Tendency
- D. Analysis of Quality of Assessment

Sub-part A. is the narrative conclusion of all information known to the Division regarding the class of property under analysis. Sub-parts B through D describe important statistical indicators the Division analyzes when comparing assessment actions to statistical results.

The recognition of special valuation of agricultural land in a county, in whole or in part, presents challenges to the measurement of level of value and quality of assessment of special value. Special valuation is a unique assessment process that imposes an obligation upon the assessment officials to assess qualified real property at a constrained taxable value.

Special valuation is recognized if the county assessor has determined that there are factors other than agricultural or horticultural influences on the actual value of agricultural land and has established a special value that is different than the full market value for part or all of the agricultural land in the county. If a county has received applications for special valuation, all information necessary for the measurement of agricultural land in that county will be contained in the Agricultural or Special Valuation Section of the R&O.

County Reports Section

Contains reports from and about a county which are referenced in other sections of the R&O:

County Abstract of Assessment for Real Property, Form 45

The Form 45 is a required administrative report filed annually with the Division by the county assessor. It is a summation of the 2012 assessed values and parcel record counts of each defined class or subclass of real property in the county and the number of acres and total assessed value by Land Capability Group (LCG) within a market area (if any).

County Agricultural Land Detail

The Agricultural Land Detail is prepared by the Division. The Division relies on the data submitted by the county assessor on the Abstract of Assessment of Real Property, Form 45, Schedule IX and computes by county and by market area (if any) the average assessed value of each land use.

The County Assessor's Three Year Plan of Assessment-Update

The Three Year Plan of Assessment is prepared by the county assessor and updated annually pursuant to Neb. Rev. Stat. § 77-1311.02 (2009). It explains the scope and detail of the assessment processes planned by the county assessor for the next assessment year and subsequent two assessment years.

County Abstract of Assessment for Real Property Compared to the Certificate of Taxes Levied (CTL)

A comparison of the 2012 County Abstract of Assessment for Real Property, Form 45, compared to the 2011 Certificate of Taxes Levied (CTL) Report compares data from two annual administrative reports filed by the county assessor. It compares the data from the 2011 CTL to establish the prior year's assessed valuation and compares it to the data from the 2012 County Abstract of Assessment for Real Property, Form 45, to demonstrate the annual change in assessed valuation that has occurred between assessment years. This report displays the amount of assessed dollars of change in value and the percentage change in the value of various classes and subclasses of real property. It also displays real property growth valuation in the county.

Assessment Survey – General Information

This is general information developed in a combined effort between the Division and the county assessor to describe the funding and staffing of the county assessor's office. It also documents the appraisal information and assessment actions as related to the three major classes of property; residential, commercial and agricultural land.

Nebraska Constitutional Provisions:

Neb. Const. art. VIII, § 1, (1): Taxes shall be levied by valuation uniformly and proportionately upon all real property and franchises as defined by the Legislature except as otherwise provided in or permitted by this Constitution.

Neb. Const. art. VIII, §1, (4): the Legislature may provide that agricultural land and horticultural land, as defined by the Legislature, shall constitute a separate and distinct class of property for purposes of taxation and may provide for a different method of taxing agricultural land and horticultural land which results in values that are not uniform and proportionate with all other real property and franchises but which results in values that are uniform and proportionate upon all property within the class of agricultural land and horticultural land.

Neb. Const. art. VIII, §1, (5): the Legislature may enact laws to provide that the value of land actively devoted to agricultural or horticultural use shall for property tax purposes be that value which such land has for agricultural or horticultural use without regard to any value which such land might have for other purposes or uses.

Nebraska Statutory Provisions for Agricultural Land:

Neb. Rev. Stat. § 77-112 (2009): Actual value, defined. Actual value of real property for purposes of taxation means the market value of real property in the ordinary course of trade. Actual value may be determined using professionally accepted mass appraisal methods, including, but not limited to, the (1) sales comparison approach using the guidelines in section 77-1371, (2) income approach, and (3) cost approach.

Actual value is the most probable price expressed in terms of money that a property will bring if exposed for sale in the open market, or in an arm's length transaction, between a willing buyer and willing seller, both of whom are knowledgeable concerning all the uses to which the real property is adapted and for which the real property is capable of being used. In analyzing the uses and restrictions applicable to real property, the analysis shall include a consideration of the full description of the physical characteristics of the real property and an identification of the property rights being valued.

Neb. Rev. Stat. § 77-201 (2009): Property taxable; valuation; classification.

(1) Except as provided in subsections (2) through (4) of this section, all real property in this state, not expressly exempt therefrom, shall be subject to taxation and shall be valued at its actual value.

(2) Agricultural land and horticultural land as defined in section 77-1359 shall constitute a separate and distinct class of property for purposes of property taxation, shall be subject to taxation, unless expressly exempt from taxation, and shall be valued at seventy-five percent of its actual value.

(3) Agricultural land and horticultural land actively devoted to agricultural or horticultural purposes which has value for purposes other than agricultural or horticultural uses and which meets the qualifications for special valuation under section 77-1344 shall constitute a separate and distinct class of property for purposes of property taxation, shall be subject to taxation, and shall be valued for taxation at seventy-five percent of its special value as defined in section 77-1343. . . .

Neb. Rev. Stat. § 77-1359 (2009): Agricultural and horticultural land; terms defined.

. . . (1) Agricultural land and horticultural land means a parcel of land, excluding any building or enclosed structure and the land associated with such building or enclosed structure located on the parcel, which is primarily used for agricultural or horticultural purposes, including wasteland lying in or adjacent to and in common ownership or management with other agricultural and horticultural land;

(2) Agricultural or horticultural purposes means used for the commercial production of any plant or animal product in a raw or unprocessed state that is derived from the science and art of agriculture, aquaculture, or horticulture. Agricultural or horticultural purposes includes the following uses of land:

(a) Land retained or protected for future agricultural or horticultural purposes under a conservation easement as provided in the Conservation and Preservation Easements Act except when the parcel or a portion thereof is being used for purposes other than agricultural or horticultural purposes; and

- (b) Land enrolled in a federal or state program in which payments are received for removing such land from agricultural or horticultural production;

Nebraska Statutory Provisions for Special Valuation:

Neb. Rev. Stat. § 77-201(3) (2009): For agricultural land that qualifies for special valuation, this statutory section creates a separate and distinct class of property for special valuation for purposes of property taxation, which shall be subject to taxation, and shall be valued for taxation at seventy-five percent of its special value as defined in Neb. Rev. Stat. §77-1343 (2009).

Neb. Rev. Stat. § 77-1343(5) (2009): Defines special valuation. Special valuation means the value that the land would have for agricultural or horticultural purposes or uses without regard to the actual value the land would have for other purposes or uses.

Nebraska Statutory Provisions for Measurement of Level of Value:

Neb. Rev. Stat. § 77-1327(4) (2011): For purposes of determining the level of value of agricultural and horticultural land subject to special valuation under sections 77-1343 to 77-1347.01, the Property Tax Administrator shall annually make and issue a comprehensive study developed in compliance with professionally accepted mass appraisal techniques to establish the level of value if in his or her opinion the level of value cannot be developed through the use of the comprehensive assessment ratio studies developed in subsection (3) of this section.

Neb. Rev. Stat. § 77-5023(2) (2009): An acceptable range is the percentage of variation from a standard for valuation as measured by an established indicator of central tendency of assessment. Acceptable ranges are: (a) For agricultural and horticultural land as defined in section 77-1359, sixty-nine to seventy-five percent of actual value; (b) for lands receiving special valuation, sixty-nine to seventy-five percent of special valuation as defined in section 77-1343; and (c) for all other real property, ninety-two to one hundred percent of actual value.

Neb. Rev. Stat. § 77-5027(5) (2011): The Property Tax Administrator shall employ the methods specified in section 77-112, the comprehensive assessment ratio study specified in section 77-1327, other statistical studies, and an analysis of the assessment practices employed by the county assessor. If necessary to determine the level of value and quality of assessment in a county, the Property Tax Administrator may use sales of comparable real property in market areas similar to the county or area in question or from another county as indicators of the level of value and the quality of assessment in a county. The Property Tax Administrator may use any other relevant information in providing the annual reports and opinions to the commission.

Discussion of the Constitutional and Statutory Provisions:

Nebraska law requires that all values of real property for tax purposes shall be uniform and proportionate. Agricultural land may be treated differently from other real property for tax purposes, but the assessed values shall be uniform and proportionate within the class of agricultural land. Additionally, agricultural land may be valued for tax purposes at its value solely for agricultural use without regard to the incremental value the land might have for any other purpose and use; however, these values must be uniform and proportionate within the application of this constitutional provision.

Nebraska's statutory structure for the valuation of agricultural land is fairly straightforward. The valuation policy is based on actual or market value. Actual value is a common, market standard that is used to determine the value of a property for many purposes, including taxation. Actual value is also a measure that is governed by practices and principles familiar to most people. Additionally, using actual value as the standard by which to determine valuation of real property provides the property owner with the ability to judge the proportionality of the valuation with other like property.

Discussion of Special Valuation:

The policy of special valuation was developed following the Constitutional amendment which recognized that the conversion of agricultural land to other uses demanded action for two purposes: one, the systematic and planned growth and development near and around urban areas; and two, to provide a tax incentive to keep agricultural uses in place until the governing body was ready for the growth and development of the land. Special value is both a land management tool and a tax incentive for compliance with the governing body's land management needs. As alternative, more intensive land uses put pressure for the conversion of underdeveloped land, economic pressures for higher and more intensive uses from non-agricultural development provide economic incentives to landowners to sell or convert their land. Governments, in order to provide for the orderly and efficient expansion of their duties, may place restrictions on landowners who convert land from one land use to a higher more intensive land use. Additionally, the existing landowners who may wish to continue their agricultural operations have an incentive to continue those practices until the governing body is ready for the conversion of their property to a more intensive use.

Without special valuation, existing agricultural landowners in these higher intensive use areas would be forced to convert their land for tax purposes, as the market value of the land could be far greater than its value for agricultural purposes and uses. The history of special valuation would indicate that the other purposes and uses are those not normally or readily known within the agricultural sector and are more intensive, such as residential, recreational, commercial or industrial development.

There are two scenarios that exist when special valuation is implemented in a county:

One, special valuation is applicable in a defined area of the county or only for certain types of land in the county. In these situations the county has found that use of the land for non-agricultural purposes and uses influences the actual value of some of the agricultural land in the county. In these situations, the Division must measure the level of value of agricultural land and special value. If the methodology of the county assessor states that the county assessor used sales of similar land that are not influenced by the non-agricultural purposes and uses of the land, then the sales of uninfluenced land are used to determine the special valuation of the influenced land. The sales of agricultural land that are not influenced by the non-agricultural purposes and uses are used to measure the level of value of uninfluenced agricultural land.

Two, special valuation is applicable in the entire county. In this situation the county has found that the actual value of land for other purposes and uses other than agricultural purposes and uses influences the actual value of all of the agricultural land in the county. In these situations, the Division must measure the special value level of value.

Measurement of Special Valuation

The Division has two options in measuring the level of value of special valuation. In a county where special valuation is not applicable in the entire county and the land that is subject to special value is similar to agricultural land that is not subject to special value, the Division can analyze the level of value outside the special valuation area and determine if the level of value in that area should be deemed to be the level of value for special valuation. If the land in the special value area is dissimilar to other agricultural land in the county so there is no comparability of properties, the Division would analyze the valuations applicable for special value to determine if they correlate with the valuations in other parts of the county or other counties, even though direct comparability may not exist.

In a county where special valuation is applicable throughout the entire county, the Division has developed a measurement methodology which does not rely on the sales of agricultural land in the county where the influence occurs. In developing this methodology, the Division considered all possible mass appraisal techniques. There is, however, no generally accepted approach for the measurement of constrained values. For example, the assessment/sales ratio study measures influences of the “whole” market. In counties where there are nonagricultural influences throughout the county, there are no sales in that county without a nonagricultural influence on value. As a result, the Division had to examine and adapt professionally accepted mass appraisal techniques to the measurement of special valuation other than the assessment sales ratio.

The Division utilizes both a sales-based and income-based measurement approach to project an uninfluenced agricultural land value for counties fully influenced. In the sales-based analysis sales from comparable counties where agricultural land sells without regard to alternative uses act as “surrogate” sales. A measurement of the assessed values against the sale prices of the “surrogate” sales provides an indication of the level of value for the influenced subject county.

This method produces an equalized relationship with the assessed values in counties of the general area and ensures that common uninfluenced agricultural land markets are recognized.

The Division additionally utilizes an income analysis for the influenced counties by using comparable uninfluenced counties' potential income divided by the actual value of these counties to develop and correlate a discount rate to use to capitalize the agricultural income of the influenced counties. For purposes of determining the income for the Division's measurement technique, the Division gathered cash rent data for agricultural land. There were three sources for cash rent data: One, the annual study done by the University of Nebraska, Lincoln, titled *Nebraska Farm Real Estate Market Developments 2010-2011*. Two, another annual survey entitled *Farm and Ranch Managers Cash Rental Rate Survey*, which is provided to the Division from the Board of Educational Lands and Funds (BELF). Three, the Board of Educational Lands and Funds (BELF), also provides a statewide survey and an in depth schedule of crop land and grass land rental rates.

For purposes of determining comparable counties, the Division considered data related to the crop production and cropping patterns produced by the *United States Department of Agriculture* (USDA), as well as general soil associations indicated by the Major Land Resource Areas determined by the USDA. Land use, topography, and proximity to the subject county are considered when determining the general areas of comparability. The Division also uses cash rent data for agricultural land from the University of Nebraska, Lincoln, in a document titled *Nebraska Farm Real Estate Market Developments 2010-2011*. Another annual survey entitled *Farm and Ranch Managers Cash Rental Rate Survey*, is used which is provided to the Division from the Board of Educational Lands and Funds (BELF). In addition, the Board of Educational Lands and Funds (BELF), also provides a statewide survey and an in depth schedule of crop land and grass land rental rates that are used by the Department in the income analysis.

Purpose Statement

Describes the contents and purpose of each section in the R&O.

Glossary

Contains the definitions of terms used throughout the R&O.

Technical Specifications Section

Contains the calculations used to prepare the Commission Summary, the Correlation Section tables, the Statistical Reports Query, and the Statistical Reports.

Certification

Sets forth who the R&Os were delivered to, the method of delivery, and the date of delivery.

Map Section

The Map section contains a collection of maps that the Property Tax Administrator has gathered that pertain to each county. These maps may be used as a supplement to the R&O.

Valuation History Charts Section

The Valuation History chart section contains five charts for each county. The first four charts display taxable valuations by property class and subclass, annual percentage change, cumulative percentage change, and the rate of annual percent change over the time period of 2000 to 2010. The fifth chart displays 2012 taxable valuations by property type for each city within the county and compares to the county's valuation for each class and subclass of property. The fifth chart also displays populations for the cities and the county.

Glossary

Actual Value: The market value or fair market value of real property in the ordinary course of trade. Actual value may be determined using professionally accepted mass appraisal methods, including, but not limited to, the (1) sales comparison approach using the guidelines in section 77-1371, (2) income approach, and (3) cost approach. Actual value is the most probable price expressed in terms of money that a property will bring if exposed for sale in the open market, or in an arm's length transaction, between a willing buyer and willing seller, both of whom are knowledgeable concerning all the uses of which the real property is adapted and for which the real property is capable of being used. In analyzing the uses and restrictions applicable to real property, the analysis shall include a consideration of the full description of the physical characteristics of the real property and an identification of the property rights being valued. Neb. Rev. Stat. § 77-112 (2009).

Adjusted Sale Price: A sale price that is the result of adjustments made to the purchase price reported on the Real Estate Transfer Statement, Form 521, for the affects of personal property or financing included in the reported purchase price. If the sale price is adjusted, it is the adjusted sale price that will be used as the denominator in the assessment sales ratio.

Agricultural Land: Land that is agricultural land and horticultural land as defined in Neb. Rev. Stat. §§ 77-1343 (2009) and 77-1359 (2009).

Agricultural Land Market Area: Area with defined characteristics within which similar agricultural land is effectively competitive in the minds of buyers and sellers with other comparable agricultural land in the area within a county. These areas are defined by the county assessor.

Agricultural Property Classification: Includes all properties in the state-wide sales file with Property Classification Code: Property parcel type-05 Agricultural, all Statuses. A sub-classification is defined for the Status-2: unimproved agricultural properties (see, Agricultural Unimproved Property Classification).

Agricultural Unimproved Property Classification: Includes all properties in the state-wide sales file with Property Classification Code: Property parcel type-05 Agricultural, Status-2.

Arm's Length Transaction: A sale between two or more parties, each seeking to maximize their positions from the transaction. All sales are deemed to be arm's length transactions unless determined to be otherwise under professionally accepted mass appraisal techniques.

Assessed Value: The value of a parcel of real property established by a government that will be the basis for levying a property tax. In Nebraska, the assessed value of a parcel of real property is first established by the county assessor of each county. For purposes of the Division's sales file, the assessed value displays the value for land, improvements and total. The assessed value is the numerator in the assessment sales ratio.

Assessment: The official act of the county assessor to discover, list, value, and determine the taxable value of real property in a county and placing it on the assessment roll.

Assessment Level: The legal requirement for the assessed value of all parcels of real property. In Nebraska, the assessment level for the classes of residential and commercial real property is one hundred percent of actual value; the assessment level for the class of agricultural and horticultural land is seventy-five percent of actual value; and, the assessment level for agricultural land receiving special valuation is seventy-five percent of special valuation.

Assessment Sales Ratio: The ratio that is the result of the assessed value divided by the sale price, or adjusted sale price, of a parcel of real property that has sold within the study period of the state-wide sales file.

Average Absolute Deviation (AVG.ABS.DEV.): The arithmetic mean of the total absolute deviations from a measure of central tendency such as the median. It is used in calculating the coefficient of dispersion (COD).

Average Assessed Value: The value that is the result of the total assessed value of all sold properties in the sample data set divided by the total of the number of sales in the sample data set.

Average Selling Price: The value that is the result of the total sale prices of all properties in the sample data set divided by the total of the number of sales in the sample data set.

Central Tendency, Measure of: A single point in a range of observations, around which the observations tend to cluster. The three most commonly used measures of central tendency calculated by the Division are the median ratio, weighted mean ratio and mean ratio.

Coefficient of Dispersion (COD): A measure of assessment uniformity. It is the average absolute deviation calculated about the median and expressed as a percentage of the median.

Coefficient of Variation (COV): The measure of the relative dispersion of the sample data set about the mean. It is the standard deviation expressed in terms of a percentage of the mean.

Commercial Property Classification: Includes all properties in the state-wide sales file with Property Classification Code: Property parcel type-02 Multi-Family, all Statuses; Property parcel type 03-Commercial, all Statuses; and, Property parcel type 04-Industrial, all Statuses.

Confidence Interval (CI): A calculated range of values in which the true measure of central tendency of the sales is expected to fall. The Division has calculated confidence intervals around all three measures of central tendency.

Confidence Level: The required degree of confidence in a confidence interval commonly stated as 90, 95, or 99 percent. For example, a 95 percent confidence interval would mean that one can be 95% confident that the true measure of central tendency used in the interval falls within the indicated range.

Direct Equalization: The process of adjusting the assessed values of parcels of real property, usually by class or subclass, using adjustment factors or percentages, to achieve proportionate valuations among the classes or subclasses.

Equalization: The process to ensure that all locally assessed real property and all centrally assessed real property is assessed at or near the same level of value as required by law.

Geo Code: Each township represented by a state-wide unique sequential four-digit number starting with the township in the most northeast corner of the state in Boyd County going west to the northwest corner of the state in Sioux County and then proceeding south one township and going east again, until ending at the township in the southwest corner of the state in Dundy County.

Growth Value: Is reported by the county assessor on the Abstract of Assessment for Real Property, Form 45. Growth value includes all increases in valuation due to improvements of real properties as a result of new construction, improvements, and additions to existing buildings. Growth value does not include a change in the value of a class or subclass of real property as a result of the revaluation of existing parcels, the value changes resulting from a change in use of the parcel, or taxable value added because a parcel has changed status from exempt to taxable. There is no growth value for agricultural land.

Indirect Equalization: The process of computing hypothetical values that represent the best estimate of the total taxable value available at the prescribed assessment level. Usually a function used to ensure the proper distribution of intergovernmental transfer payments between state and local governments, such as state aid to education.

Level of Value: The level of value is the most probable overall opinion of the relationship of assessed value to actual value achieved by the county assessor for a class or subclass of centrally assessed property. The Property Tax Administrator is annually required to give an opinion of the level of value achieved by each county assessor to the Tax Equalization and Review Commission. The acceptable range for levels of value for classes of real property are provided in Neb. Rev. Stat. § 77-5023 (2009).

Majority Land Use: The number of acres compared to total acres by land use for agricultural land. The thresholds used by the Division are: 95%, 80% and 50%. If “N/A” appears next to any category it means there are “other” land classifications included within this majority grouping.

Maximum Ratio: The largest ratio occurring in the arrayed sample data set.

Mean Ratio: The ratio that is the result of the total of all assessment/sales ratios in the sample data set divided by the number of ratios in the sample data set.

Median Ratio: The middle ratio of the arrayed sample data set. If there is an even number of ratios, the median is the average of the two middle ratios.

Minimally Improved Agricultural Land: A statistical report that uses the sales file data for all sales of parcels classified as Property Classification Code: Property parcel type-05 Agricultural, which have non-agricultural land and/or improvements of minimal value, the assessed value of the improvement(s) is determined to be less than 5% of the selling price.

Minimum Ratio: The smallest ratio occurring in the arrayed sample data set.

Non-Agricultural Land: For purposes of the County Abstract of Assessment for Real Property, Form 45, land located on a parcel that is classified as Property Classification Code: Property parcel type-05 Agricultural, which is not defined as agricultural and horticultural land, pursuant to Neb. Rev. Stat. § 77-1359 (2009).

Number of Sales: The total number of sales contained in the sales file that occurred within the applicable Sale Date Range for the class of real property.

Population: The set of data from which a statistical sample is taken. In assessment, the population is all parcels of real property within a defined class or subclass in the county.

Price Related Differential (PRD): A measure of assessment vertical uniformity (progressivity or regressivity). It measures the relative treatment of properties based upon the selling price of the properties. It is calculated by dividing the mean ratio by the weighted mean ratio.

Property Classification Code: A code that is required on the property record card of all parcels of real property in a county. The Property Classification Code enables the stratification of real property into classes and subclasses of real property within each county. The classification code is a series of numbers which is defined in Title 350, Nebraska Administrative Code, ch.10-004.02.

Property Type: The portion of the Property Classification Code that indicates the predominant use of the parcel as determined by the county assessor. The Property parcel types are:

- 01-Single Family Residential
- 02-Multi-Family Residential
- 03-Commercial
- 04-Industrial
- 05-Agricultural
- 06-Recreational
- 07-Mobile Home
- 08-Minerals, Non-Producing
- 09-Minerals, Producing
- 10-State Centrally Assessed
- 11-Exempt
- 12-Game and Parks

Purchase Price: The actual amount, expressed in terms of money, paid for a good or service by a willing buyer. This is the amount reported on the Real Estate Transfer Statement, Form 521, Line 22.

Qualified Sale: A sale which is an arm's length transaction included in the state-wide sales file. The determination of the qualification of the sale may be made by the county assessor or the Division.

Qualitative Statistics: Statistics which assist in the evaluation of assessment practices, such as the coefficient of dispersion (COD) and the price related differential (PRD).

Quality of Assessment: The quality of assessment achieved by the county assessor for a class or subclass of real property. The Property Tax Administrator is annually required to give an opinion of the quality of assessment achieved by each county assessor to the Commission.

Residential Property Classification: Includes all properties in the state-wide sales file with Property Classification Code: Property parcel type-01 Single Family, all Statuses; Property parcel type-06 Recreational, all Statuses; and, Property parcel type-07 Mobile Home, Statuses 1 and 3.

Sale: All transactions of real property for which the Real Estate Transfer Statement, Form 521, is filed and with stated consideration of more than two dollars and twenty-five cents of documentary stamp taxes are paid.

Sale Date Range: The range of sale dates reported on Real Estate Transfer Statements, Form 521, that are included in the sales assessment ratio study for each class of real property.

Sale Price: The actual amount, expressed in terms of money, received for a unit of goods or services, whether or not established in a free and open market. The sale price may be an indicator of actual value of a parcel of real property. An estimate of the sales price may be made from the amount of Documentary Stamp Tax reported on the Real Estate Transfer Statement, Form 521, as the amount recorded on the deed. The sale price is part of the denominator in the assessment sales ratio.

Sample Data Set: A set of observations selected from a population.

Special Valuation: For agricultural and horticultural land receiving special valuation, the assessed value of the land if the land is qualified for special valuation. Special valuation means the value that the land has for agricultural or horticultural purposes or uses without regard to the actual value that land has for other purposes and uses. Special valuation land is valued for taxation at 75% of its special value.

Standard Deviation (STD): The measure of the extent of the absolute difference of the sample data set around the mean. This calculation is the first step in calculating the coefficient of variation (COV). It assumes a normalized distribution of data, and therefore is not heavily relied on in the analysis of assessment practices.

Statistics: Numerical descriptive data calculated from a sample; for example: the median, mean or COD. Statistics are used to estimate corresponding measures for the population. *See, International Association of Assessing Officers publication, Glossary for Property Appraisal and Assessment, (1997).*

Status: The portion of the Property Classification Code that describes the status of a parcel:

- 1-Improved, land upon which buildings are located.
- 2-Unimproved, land without buildings or structures.
- 3-Improvement on leased land (IOLL), any item of real property which is located on land owned by a person other than the owner of the item.

Total Assessed Value: The sum of all the assessed values in the sample data set.

Total Sale Price: The sum of all the sale prices in the sample data set. If the selling price of a sale was adjusted for qualification, then the adjusted selling price would be used.

Usability: The coding for the treatment of a sale in the state-wide sales file database.

- 1-use the sale without adjustment
- 2-use the sale with an adjustment
- 3-substantially changed sale should not be used in study
- 4-exclude the sale

Valuation: Process or act to determine the assessed value of all parcels of real property in the county each year.

Valuation Grouping: A grouping of parcels with similar characteristics that affect the value for that class or subclass of property in the county. Valuation groupings represent the class or subclass of property that the assessor uses to value real property in the county. These groupings are defined by the county assessor.

Weighted Mean Ratio: The ratio that is the result of the total of all assessed values of all properties in the sample data set divided by the total of all sale prices of all properties in the sample data set.

Commission Summary Calculations

For all classes of real property

For Statistical Header Information and History: see Statistical Calculations

For Residential Real Property

% of value of this class of all real property value in the county:

$\text{Abstract \#4 value} + \text{Abstract \#16 value} / \text{Abstract Total Real Property Value}$

% of records sold in study period:

$\text{Total Sales from Sales File} / \text{Abstract \#4 records} + \text{Abstract \#16 records}$

% of value sold in the study period:

$\text{Total Value from Sales File} / \text{Abstract \#4 value} + \text{Abstract \#16 value}$

Average assessed value of the base:

$\text{Abstract \#4 value} + \text{Abstract \#16 value} / \text{Abstract \#4 records} + \text{Abstract \#16 records}$

For Commercial Real Property

% of value of this class of all real property value in the county:

$\text{Abstract \#8 value} + \text{Abstract \#12 value} / \text{Abstract Total Real Property Value}$

% of records sold in study period:

$\text{Total Sales from Sales File} / \text{Abstract \#8 records} + \text{Abstract \#12 records}$

% of value sold in the study period:

$\text{Total Value from Sales File} / \text{Abstract \#8 value} + \text{Abstract \#12 value}$

Average assessed value of the base:

$\text{Abstract \#8 value} + \text{Abstract \#12 value} / \text{Abstract \#8 records} + \text{Abstract \#12 records}$

For Agricultural Land

% of value of this class of all real property value in the county:

$\text{Abstract \#30 value} / \text{Abstract Total Real Property Value}$

% of records sold in the study period:

$\text{Total Sales from Sales File} / \text{Abstract \#30 records}$

% of value sold in the study period:

$\text{Total Value from Sales File} / \text{Abstract \#30 value}$

Average assessed value of the base:

$\text{Abstract \#30 value} / \text{Abstract \#30 records}$

Statistical Reports Query

The Statistical Reports contained in the Reports and Opinions for each county derive from the sales file of the Department of Revenue Property Assessment Division. The sales file contains all recorded real property transactions with an amount stated on the Real Estate Transfer Statement, Form 521, for Documentary Stamp Tax greater than \$2.25 or for consideration greater than \$100. Transactions meeting these criteria are considered sales.

The first query performed by the sales file is by county number. For each of the following property classifications, the sales file performs the following queries:

Residential:

Property Class Code: Property Type 01, Statuses 1 and 3
Property Type 06, Statuses 1 and 3
Property Type 07, Statuses 1 and 3
Sale Date Range: July 1, 2009 through June 30, 2011
Qualified: All sales with Assessor Usability Code: blank, zero, 1 or 2.
If blank or zero will be considered a Usability of 1.

Commercial:

Property Class Code: Property Type 02, Statuses 1 and 3
Property Type 03, Statuses 1 and 3
Property Type 04, Statuses 1 and 3
Sale Date Range: July 1, 2008 through June 30, 2011
Qualified: All sales with Division Usability Code: zero, 1 or 2
If blank or zero will be considered a Usability of 1.

Agricultural:

Property Class Code: Property Type 05, in which the non-ag is less than 5% of the sale price.
Sale Date Range: July 1, 2008 through June 30, 2011
Qualified: All sales with Division Usability Code: zero, 1 or 2.
If blank or zero will be considered a Usability of 1.

Statistical Calculations

The results of the statistical calculations that make up the header of the Statistical Reports are:

Number of Sales
Total Sales Price
Total Adj. Sales Price
Total Assessed Value
Avg. Adj. Sales Price
Avg. Assessed Value

Median
Weighted Mean
Mean
COD
PRD
COV
STD
Avg. Abs. Dev.
Max Sales Ratio
Min Sales Ratio
95% Median C.I.
95% Wgt. Mean C.I.
95% Mean C.I.

Coding Information & Calculations

Each sale in the sales file becomes a record in the sales file program. All statistical calculations performed by the sales file program round results in the following manner: if the result is not a whole number, then the program will round the result five places past the decimal and truncate to the second place past the decimal. Sales price and assessed value are whole numbers.

Number of Sales

- Coded as Count, Character, 5-digit field.
- The Count is the total number of sales in the sales file based upon the selection of Total or Qualified. For purposes of this document, Qualified and Sale Date Range is assumed.

Total Sales Price

- Coded as TotSalePrice, Character, 15-digit field.
- The Total Sales Price is based on the Total Sale Amount, shown on Line 24 of the Real Estate Transfer Statement, Form 521, for each record added together.
- Calculation
 - Sum SaleAmt

Total Adj. Sales Price

- Coded as TotAdjSalePrice, Character, 15-digit field.
- The Total Adjusted Sales Price is the Total Sale Amount for each record plus or minus any adjustments made to the sale by the county assessor, Division or the Commission (from an appeal).
- Calculation
 - Sum SaleAmt + or – Adjustments

Total Assessed Value

- Coded as TotAssdValue, Character, 15-digit field.
- The Total Assessed Value is based on the Entered Total Current Year Assessed Value Amount for each record. If the record is an agricultural record, Property Classification Code: Property Parcel Type-05, then the Total Assessed Value is the Entered Current Year Total Value adjusted by any value for Non-Ag Total and Current Year Total Improvements, so that the Total Assessed Value used in the calculations for these records is the assessed value for the agricultural land only.
- Calculation
 - Sum TotAssdValue

Avg. Adj. Sales Price

- Coded as AvgAdjSalePrice, Character, 15-digit field.
- The Average Adjusted Sale Price is dependant on the TotAdjSalePrice and the Count defined above.
- Calculation
 - TotAdjSalePrice/Count

Avg. Assessed Value

- Coded as AvgAssdValue, Character, 15-digit field.
- The Average Assessed Value is dependant on the TotAssdValue and the Count defined above.
- Calculation
 - $TotAssdValue/Count$

Median

- Coded as Median, Character, 12-digit field.
- The Median ratio is the middle ratio when the records are arrayed in order of magnitude by ratio.
 - If there is an odd number of records in the array, the median ratio is the middle ratio of the array.
 - If there is an even number of records in the array, the median ratio is the average of the two middle ratios of the array.
- Calculation
 - Array the records by order of the magnitude of the ratio from high to low
 - Divide the Total Count in the array by 2 equals Record Total
 - If the Total Count in the array is odd:
 - Count down the number of whole records that is the Record Total + 1. The ratio for that record will be the Median ratio
 - If the Total Count in the array is even:
 - Count down the number of records that is Record Total. This is ratio 1.
 - Count down the number of records that is Records Total + 1. That is ratio 2.
 - $(ratio\ 1 + ratio\ 2)/2$ equals the Median ratio.

Weighted Mean

- Coded as Aggreg, Character, 12-digit field.
- Calculation
 - $(TotAssdValue/TotAdjSalePrice)*100$

Mean

- Coded Mean, Character, 12-digit field
- Mean ratio is dependant on TotalRatio which is the sum of all ratios in the sample.
- Calculation
 - $TotalRatio/RecCount$

COD

- Coded COD, Character, 12-digit field
- Calculation
 - Subtract the Median from Each Ratio
 - Take the Absolute Value of the Calculated Differences
 - Sum the Absolute Differences
 - Divide by the Number of Ratios to obtain the “Average Absolute Deviation”
 - Divide by the Median
 - Multiply by 100

PRD

- Coded PRD, Character, 12-digit field
- Calculation
 - $(\text{MeanRatio}/\text{AggregRatio}) * 100$

COV

- Coded COV, Character, 12-digit field
- Calculation
 - Subtract the Mean from each ratio
 - Square the Calculated difference
 - Sum the squared differences
 - Divide the number of ratios less one to obtain the Variance of the ratios
 - Compute the Squared Root to obtain the Standard Deviation
 - Divide the Standard Deviation by the Mean
 - Multiply by 100

STD

- Coded StdDev, Character, 12-digit field
- Calculation
 - Subtract the Mean Ratio from each ratio
 - Square the resulting difference
 - Sum the squared difference
 - Divide the number of ratios less one to obtain the Variance of the ratios
 - Compute the squared root of the variance to obtain the Standard Deviation

Avg. Abs. Dev.

- Coded AvgABSDev, Character, 12-digit field
- Calculation
 - Subtracting the Median ratio from each ratio
 - Summing the absolute values of the computed difference
 - Dividing the summed value by the number of ratios

Max Sales Ratio

- Coded Max, Character, 12-digit field
- The Maximum ratio is the largest ratio when the records are arrayed in order of magnitude of ratio.

Min Sales Ratio

- Coded Min, Character, 12-digit field
- The Minimum ratio is the smallest ratio when the records are arrayed in order of magnitude of ratio.

95% Median C.I.

- Coded MedianConfInterval, Character, 12-digit field
- The Median Confidence Interval is found by arraying the ratios and identifying the ranks of the ratios corresponding to the Lower and Upper Confidence Limits. The equation for the number of ratios (j), that one must count up or down from the median to find the Lower and Upper Confidence Limits is:
- Calculation
 - If the number of ratios is Odd
 - $j = 1.96x\sqrt{n}/2$
 - If the number of ratios is Even
 - $j = 1.96x\sqrt{n}/2 + 0.5$
 - If the calculation has anything past the decimal, it will be rounded to the next whole number and the benefit of the doubt is given
 - If the sample size is 5 or less, then N/A is given as the confidence interval
 - If the sample size is 6-8, then the Min and Max is the given range

95% Wgt. Mean C.I.

- Coded AggregConfInterval, Character, 12-digit field
- Calculation
 - Items needed for this calculation
 - Number of sales
 - Assessed Values – Individual and Summed
 - Assessed Values Squared – Individual and Summed
 - Average Assessed Value
 - Sale Prices – Individual and Summed
 - Sales Prices Squared – Individual and Summed
 - Average Sale Price
 - Assessed Values x Sale Prices – Individual and Summed
 - The Weighted Mean
 - The t value for the sample size

- The actual calculation:

$$CI(\bar{A}/\bar{S}) - \bar{A}/\bar{S} \pm t \times \frac{\sqrt{\sum A^2 - 2(\bar{A}/\bar{S}) \sum (A \times S) + (\bar{A}/\bar{S})^2 (\sum S^2)}}{\bar{S} \sqrt{(n) (n-1)}}$$

- If the sample size is 5 or less, then N/A is given as the confidence interval

95% Mean C.I.

- Coded MeanConfInterval, Character, 12-digit field
- The Mean Confidence Interval is based on the assumption of a normal distribution and can be affected by outliers.
- Calculation
 - Lower Limit
 - $\text{The Mean} - ((t\text{-value} * \text{The Standard Deviation}) / \text{the Square Root of the Number of Records})$
 - Upper Limit
 - $\text{The Mean} + ((t\text{-value} * \text{The Standard Deviation}) / \text{the Square Root of the Number of Records})$
 - If the number of records is > 30, then use 1.96 as the t-value
 - If the number of records is <= 30, then a “Critical Values of t” Table is used based on sample size. Degrees of freedom = sample size minus 1
 - If the sample is 1 or less, then N/A is given as the confidence interval

Ratio Formulas

- Residential and Commercial Records
 - If the Assessed Value Total Equals Zero, the system changes the Assessed Value to \$1.00 for the ratio calculations. It does not make the change to the actual data.
 - If the Sale Amount is Less Than \$100.00 AND the Adjustment Amount is Zero. The system derives an Adjustment Amount based upon the Doc Stamp fee (Doc Stamp Fee/.00225).
 - Ratio Formula is: $(\text{Assessed Value Total} / (\text{Sale Amount} + \text{Adjustment Amount})) * 100$.
- Agricultural Records
 - If the Sale Amount is Less Than \$100.00 AND the Adjustment Amount is Zero. The system derives an Adjustment Amount based upon the Doc Stamp fee (Doc Stamp Fee /.00225).
 - If the Sale Amount – Assessed Improvements Amount – Entered Non-Ag Amount + Adjustment Amount = 0. The system adds \$1.00 to the Adjustment Amount.
 - If the Assessed Land Amount – Entered Non-Ag Amount Equals Zero. The system adds \$1.00 to the Assessed Land Amount.
 - Ratio Formula is:
 - a. If No Greenbelt: $(\text{Aglnd Total Amount} / (\text{Sale Amount} - \text{Assessed Improvements} - \text{Entered NonAg Amount} + \text{Adjustment Amount})) * 100$.
 - b. If Greenbelt: $(\text{Market Value Amount} / (\text{Sale Amount} - \text{Assessed Improvements Amount} - \text{Entered NonAg Amount} + \text{Adjustment Amount})) * 100$.

Valuation History Chart Specifications

EXHIBITS 1B - 93B Valuation History Charts. There are five charts for each county. The first four charts display history of taxable valuations by property class and subclass, annual percentage change, cumulative percentage change, and the rate of annual percent change over the time periods specified. The fifth chart displays 2011 taxable valuations by property type for each city within the county and compares the county's valuation for each class and subclass of property. The fifth chart also displays populations for the cities and the county. *Note: The list of cities for each county is based on the 2011 Certificate of Taxes Levied Report (CTL) and may not include certain cities/villages that did not levy a property tax or are unincorporated.*

Chart 1 (Page 1) Real Property Valuations - Cumulative %Change 2001-2011

Source: Certificate of Taxes Levied Reports CTL.

Property Class: Residential & Recreational, Commercial & Industrial, Total Agricultural Land

Chart 2 (Page 2) Real Property & Growth Valuations - Cumulative %Change 2001-2011

Source: Certificate of Taxes Levied Reports CTL & Growth Valuations from County Abstract of Assessment Reports.

Property Class & Subclass: Residential & Recreational, Commercial & Industrial, Agricultural Improvements & Site Land

Chart 3 (Page 3) Agricultural Land Valuations - Cumulative %Change 2001-2011

Source: Certificate of Taxes Levied Reports CTL.

Property Class & Subclass: Irrigated Land, Dry Land, Grass Land, Waste Land, Other Agland, Total Agricultural Land

Chart 4 (Page 4) Agricultural Land Valuation-Average Value per Acre History 2001-2011

Source: County Abstract of Assessment Report for Real Property

Property Class & Subclass: Irrigated Land, Dry Land, Grass Land, Waste Land, Other Agland, Total Agricultural Land

Chart 5 (Page 5) City Valuations by Property Type Compared to County Valuation 2011

Source: Certificate of Taxes Levied Reports CTL, County Populations per US Bureau of Census 2010, and City Populations as certified December 2011 by Nebraska Department of Revenue

Property Class & Subclass: Personal Property, Centrally Assessed Personal Property & Centrally Assessed Real Property, Residential, Commercial, Industrial, Recreational, Agricultural Land, Ag-Dwelling & Farm Home Site Land, Ag-Improvements & Farm Site Land, Mineral Interests, Total Taxable Value

City Class, Population, & Zoning Authority:

City Class:	Village	Second Class	First Class	Primary Class	Metropolitan
Population:	100-800	801-5,000	5,001-100,000	100,001-299,999	300,000 or more
Zoning Auth	1 mile outside city	1 mile outside city	2 mile outside city	3 mile outside city	3 mile outside city
Neb. Rev. Stat. §	17-201 & 17-1001	17-101 & 17-1001	16-101 & 16-901	15-101 & 15-905	14-101 & 14-419

Map Source Documentation

Each map contains a legend which describes the information contained on the map.

Registered Wells > 500 GPM: Obtained from the Nebraska Department of Natural Resources website.

Geo Codes: Compiled and edited by the staff of the Tech Support Section in the Property Assessment Division.

Sections: Obtained from the Nebraska Department of Natural Resources website.

Market Areas: Information obtained from the county assessor. Compiled and edited by the staff of the Tech Support Section in the Property Assessment Division.

Soil Classes: Obtained from the Nebraska Department of Natural Resources website.