



Measurement Division  
Division Policy No. 502  
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## STANDARDS FOR MEASUREMENT AND ANALYSIS OF CLASSES AND SUBCLASSES OF REAL PROPERTY

### POLICY STATEMENT

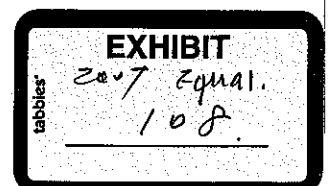
Annually, the Property Tax Administrator shall issue comprehensive assessment ratio studies of the average level of assessment, the degree of assessment uniformity, and the overall compliance with assessment requirements for each major class of real property subject to property tax in each county. This study shall be developed in compliance with professionally accepted mass appraisal techniques. See, Neb. Rev. Stat. §77-1327(3). This comprehensive information shall be available to taxing officials and property owners to ensure the uniformity and proportionality of all real property valuations. The comprehensive assessment ratio study is analyzed by the Liaisons to determine compliance with statutory requirements. Findings of such analyses, along with recommendations for adjustments, are presented to the Tax Equalization and Review Commission, ("Commission"), for equalization purposes. The Department promulgates regulations setting forth standards relating to these processes in Title 350, Neb. Admin. Code, Chapter 12, Sales File, and Chapter 17 Reports & Opinions pursuant to Neb. Rev. Stat. §77-5027.

### PURPOSE

The purpose of this division policy is to: 1) provide standard procedures for the Liaisons in performance of their duties to determine the level of value, the quality of assessment, and for making non-binding recommendations to the Commission for equalization purposes, and, 2) to employ analysis that recognizes both quantitative and qualitative assessment information to make determinations with a reasonable degree of certainty.

### STATISTICAL STUDIES

The Department may develop statistical studies, in compliance with professionally accepted mass appraisal techniques, of the following primary classes of real property: residential real property; commercial real property; and agricultural land. The statistical studies shall be calculated using all qualified sales.



The ratio study for each class of real property shall include measures of central tendency and qualitative statistics for each of the following groupings of sales: each calendar quarter in the study period; each study year in the study period; and each calendar year in the study period; and, the total sales in the study period. The ratio study of the Residential and Commercial/Industrial class of real property shall display analyses of subclasses including, but not limited to: assessor location, status, property type, school district, year built, sale price, quality, style or occupancy code of improvement, if improved, and condition. Additionally, the ratio study for unimproved agricultural land shall display analysis for market area; number of acres; and primary land use at 50, 80, and 95%. The Department may calculate statistics for other data sets as deemed appropriate.

To measure central tendency, the Department shall calculate the median, mean, weighted mean, and confidence intervals for each class of real property. The Department shall calculate the quality statistics of the coefficient of dispersion (COD) and the price-related differential (PRD) for each class and subclass of real property.

The confidence interval of each subclass of real property will be calculated around the median if a sufficient number of sales exist for the calculation. The confidence interval cannot be calculated for agricultural land receiving special valuation in a county that has implemented special value throughout the entire county. The measurement of special value of agricultural land for counties that are 100% greenbelt is an income based measurement methodology pursuant to Title 350, Neb. Admin. Code, Chapter 22, Measurement of Special Valuation.

## MEASUREMENT PROCEDURES

Each of the classes of real property have statutorily defined acceptable ranges for the level of value as found in Neb. Rev. Stat. §77-5023. The acceptable ranges are: (a) for agricultural land and horticultural land the range is sixty-nine to seventy-five percent of actual value; (b) for agricultural and horticultural land receiving special valuation, sixty-nine to seventy-five percent of special valuation and sixty-nine to seventy-five percent of recapture valuation; and (c) for all other real property, ninety-two to one hundred percent of actual value.

The Liaison shall examine all classes of real property contained in the statistical reports of each assigned county using the following analysis. For purposes of this policy, class shall mean class or subclass of real property.

### I. Evaluation of the Sample Size

A sample is the set of qualified sales within a particular class of real property. To determine whether the sample size is sufficient to evaluate the class of real property, measures of reliability shall be used, such as the width of the confidence interval, to

determine the degree of confidence that can be placed on the sample size. If the confidence interval is sufficiently narrow, the sample is considered to be adequate, but if the confidence interval is too wide, either less precision will have to be accepted or the sample size will need to be expanded using additional sales.<sup>1</sup>

Classes of real property determined through analysis to have an insufficient number of sales shall be considered to have met the statutory level of value requirement if generally accepted mass appraisal techniques are employed by the county.

If the county's assessment practices are in conflict with professionally acceptable mass appraisal techniques, for example if excessive trimming of the sample has occurred or the selective reappraisal of sold properties exists in the sample, other methods may be utilized to create a sufficient number of sales, such as creating a broader stratification, expanding the period from which sales are drawn, or enlarging the sample by reviewing nonqualified sales. Such occurrences may also initiate the evaluation and reporting process pursuant to Neb. Rev. Stat. §77-1330.

## II. Determine Representativeness

In order for an adjustment to a class of real property to be valid, a determination must be made that the sold properties proportionately reflect the unsold properties of the subject class. The following will be conducted to determine what the sales represent.

- A. Interview the assessor to determine what the sales represent. Verify with the assessor that the state sales file matches the information on the property record card and that the data and coding is accurate. Gather all other necessary data and facts the assessor provides related to the class, such as the average assessed value of the class, total assessed value of the class, and total number of parcels in the class.
- B. Determine if the class or subclass of real property represents a valuation grouping, which is a group of parcels with similar characteristics that affect value in the county. Also, determine if an adjustment to the subject class can be implemented by the county. Analyze the characteristics of the sales and the population to determine if the characteristics are similar. The characteristics for comparison may include any characteristic data contained in the sales file that relates to the market.
- C. Compare the number of sales in the strata to the total number of parcels in the population to calculate the percentage of parcels sold. Also compare the total value of sales in the strata to the total value of the population of the same strata to calculate a percentage of value sold and correlate the two percentages.

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<sup>1</sup> Standard on Ratio Studies, International Association of Assessing Officers, (1999) Section 8.2

If the analysis indicates the sample is not representative of the population, then an adjustment would not proportionately adjust the level of value of the population. In such cases, the statutory level (75% for agricultural or horticultural land, and 100% for all other real property) will be considered to have been met for that class of real property. Samples that are found to be representative of the population shall be analyzed further to determine the level of value.

### III. Determine Level of Value

If it is determined that the sales in the class of real property sufficiently represent the population, the next procedure necessary is to determine the level of value for the subject class of real property. The three measures of central tendency for the class of real property shall be evaluated to determine a level of value. For direct equalization, the median is generally preferred as the most reliable indicator of the level of value; however, all measures and their relationships to one another shall be evaluated.

If the determined level of value is not within the parameters of the statutorily acceptable range, further analysis shall be conducted to identify if an adjustment is necessary. Along with evaluating the calculated median ratio, the following studies shall also be conducted to test the validity of the calculated median ratio, or assist in supporting an alternate level of value.

- A. Investigate outlier ratios and the effect on the measures of central tendency and the qualitative statistics. If outliers can be identified, trimming procedures are acceptable methods for creating a more representative sample; however representative outlier ratios that tend to occur in certain areas or subsets of the sample may indicate systematic errors in appraisal and shall not be excluded.<sup>2</sup> If ratios of low-dollar sales strongly influence the sales sample, they shall also be analyzed. Removal of these sales for analysis purposes may require temporary inactivation from the sales file by the liaison.
- B. Review the reported assessment actions of the county for the current and previous years involving the class of real property in question. Also review the level of value for the subject class of real property for previous years, to compare the relationship between the reported assessment actions and the historical level of value to identify possible trends in assessment or to assist in the identification of a point estimate of the level of value.

If the level of value cannot be determined to a reasonable degree of certainty through this analysis, then the statutory level of value (75% for agricultural or horticultural land, and

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<sup>2</sup> Standard on Ratio Studies, International Association of Assessing Officers, (1999) Section 6.6

100% for all other real property) will be considered to have been met for that class of real property when generally accepted mass appraisal techniques are employed by the county. Counties with assessment practices in conflict with professionally accepted mass appraisal techniques shall be further examined using tests such as the trended ratio analysis of the subject class. Such occurrences may also initiate the examination and reporting process pursuant to Neb. Rev. Stat. §77-1330.

IV. Determine and Test Adjustment Factor

If the results from the comprehensive analysis indicate to a reasonable degree of certainty that the sample is representative of the population and that the determined level of value is not within the statutorily acceptable range, then determining an appropriate non-binding adjustment factor is necessary. Mathematically, the factor shall be calculated by dividing the target level of value by the determined point estimate of the level of value for the class, and rounded to the nearest whole number. The target level of value is the midpoint of the acceptable range for the class of property.

After the adjustment factor is determined, it shall be tested with an application to the sales file called the "what-if." The "what-if" statistics shall be reviewed to ensure statutory compliance has been achieved. The "what-if" statistics should also be studied to verify that no other strata were adversely affected by the hypothetical adjustment. If the level of value for a class or subclass of real property was affected by the adjustment of another, then the affected class or subclass shall be further analyzed to determine if an adjustment to that stratum is appropriate.

Once the outcome of the analysis is determined, the county assessor shall be informally notified of any non-binding recommendations for adjustment that will be made to the Commission.

APPROVED:



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