REVIEW OF SALES RATIO STUDIES

PREPARED FOR

NEBRASKA DEPARTMENT OF PROPERTY ASSESSMENT AND TAXATION

By

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August 11, 2004

Contents

Acronyms

The following acronyms are used in this report.

521:	Form 521, the standard sales disclosure form used in Nebraska
AGJD:	Almy, Gloudemans, Jacobs & Denne
CBE:	County board of equalization
COD:	Coefficient of dispersion (an assessment uniformity statistic)
CTL:	Certificate of Taxes Levied
DLL:	Dynamic Link Library, an object of program code used by more than one program
IAAO:	International Association of Assessing Officers
LOA:	Level of assessment
PA&T:	Department of Property Assessment and Taxation
PDF:	Portable Document File, a widely used computer-file format for preserving the appearance of text and images on a page, which allows the original page layout to be reconstructed from an electronic file on virtually any computer system.
PRD:	Price-related differential (an assessment uniformity statistic)
PTA:	Property Tax Administrator
R&O:	Reports and opinions
SPSS:	Statistical package for the social sciences (a brand of statistical software package)
TERC:	Tax Equalization and Review Commission

Acknowledgments

The outstanding cooperation we received from the Nebraska Department of Property Assessment and Taxation (PA&T), the Tax Equalization and Review Commission (TERC), assessors, and firms and officials representing the interests of school districts is testimony to the commitment to improve the assessment and equalization process in the state. We are especially grateful to Catherine Lang, the Property Tax Administrator, and members of the Measurement Division, headed by Dennis Donner. We benefited from the insights of Jim Haug, Stacy Portwine, and Jerry Tooker. Other PA&T staff members who helped us include Kimberly Bunch, Bill Lock, Elaine Thompson, and Jan Verbeek.

We benefited greatly from the opportunity to interview members of the TERC and to observe a day's equalization hearings. For this we thank William R. ("Bob") Wickersham, chairman; Mark Reynolds, vice-chairman, Susan Lore; and Robert Hans.

Several county assessment officials generously gave of their time to meet with us. We would like to thank Nancy Ulmer, Hamilton County Assessor; Rob Ogden, Chief Field Deputy, and Scott Gaines, Chief Administrative Deputy of Lancaster County; and Ann Charlton, York County Assessor, for their perspectives.

Finally, we acknowledge the contributions of the firms of Perry, Guthery, Haase & Gessford, P.C., L.L.O., and Harding, Schultz & Downs. In particular we would like to thank Jim Gessford of the Perry law firm. Additionally, we would like to thank representatives of Lincoln Public Schools.

The Almy, Gloudemans, Jacobs & Denne project team comprised Richard Almy, Robert Denne, and Robert Gloudemans, partners in the firm. The team wrote this report and is responsible for its findings and conclusions.

Executive Summary

The Nebraska Department of Property Assessment and Taxation (PA&T) conducts annual sales ratio studies to evaluate assessment performance in each of the State's 93 counties and to estimate the total market value of taxable real estate in each of approximately 518 school districts in about 260 school "systems" for purposes of school aid distribution. These studies are used for two important purposes: to present the Tax Equalization and Review Commission (TERC) with information to use in determining equalization orders and to estimate the true market value of real estate in each school district for purposes of school aid distribution.

Although a number of improvements have been made in recent years, we believe that fundamental changes in the State's approach to equalization are in order. First, we recommend that the statutes be modified to charge PA&T with the responsibility to determine if a class or subclass of property is not in substantial compliance with legal standards and should therefore be issued an equalization or reappraisal order. TERC should then hold hearings on and determine whether to issue such orders. We recommend that PA&T be charged with the responsibility of determining whether such orders are appropriate because it is in a better position to conduct the required statistical and technical analyses. TERC is in better position to hear evidence and make a judicial or quasi-judicial determination regarding PA&T's determinations.

Second, the State should rethink the ratio studies it conducts for school aid distribution and how they relate to those made for equalization purposes. Because many school districts overlap county lines, there are currently over 1,200 geographic areas that must be studied. Further, each of the classes or subclasses of property, i.e., personal, centrally assessed (both personal and real), residential, commercial and industrial, agricultural improvements and farmsites, agricultural land, and minerals must be studied in each area. There is simply too little market data to determine effectively a level of assessment in many of these segments. We recommend that the school aid studies be re-configured or amalgamated with the ratio study made for direct equalization purposes. The body of our report sets out specific alternatives for consideration.

In addition, we make a number of related recommendations for improving the PA&T's studies and the assessment and equalization process in general to determine effectively a level of assessment and provide for uniformity. These include the following:

- Counties should be required to provide PA&T routinely with electronic extracts of their assessment rolls, including salient property characteristics. This would facilitate data sharing and PA&T's ability to analyze each county and school district or local system uniformly.

- Standardized codes and established criteria should be used by all 93 counties to indicate why a sale is rejected for purposes of the ratio study. The criteria must ensure that all arm's-length transactions are included in the ratio study for analysis by the assessor, PA&T, and TERC. Consideration should be given to limiting the effect of sales that would distort the statistical indicators and make them an unreliable measure of the level of value (LOV).

- Confidence intervals consistent with the standards of the International Association of Assessing Officers (IAAO) should be used to determine whether equalization orders are appropriate for various *subclasses* of property. This will reduce the number of inappropriate orders and free counties from focusing on whether they are in technical compliance with level of assessment standards. Decision rules should be consistently applied. Level of assessment requirements (0.92 to 1.00 for residential and commercial properties and 0.74 to 0.80 for agricultural land) should continue to be enforced.

- Sales prices should be adjusted for time using accepted methods. Economically similar counties based on uniform and objective criteria may be amalgamated into market areas for this purpose.

- Very low-value properties should be excluded from studies because of the volatile market for such properties and the small value involved. On the other hand, special efforts should be made to include high-value properties, or to ensure that they are correctly appraised for assessment purposes. Rules for defining very low- and high-value properties should be consistently applied, although the thresholds may be defined relative to observed values in the political/economic unit rather than promulgated as statewide figures.

- PA&T should continue its efforts to determine whether counties are engaging in the unprofessional practice of "sales-chasing" and, where detected, substitute trended prior year assessments in its studies.

- PA&T should obtain and use a standard statistical package.

- PA&T should continue its reviews of county assessment practices and develop a standard structure for such reviews.

- PA&T should be assigned two or three new technical positions for purposes of implementing the enhancements recommended herein.

- Criteria and procedures for combining assessment districts should be developed with the aim of addressing the limitations that the current structure of 93 distinct assessment districts places on the reliability of statistical data for assessment and measurement.

- Efforts should be continued to consolidate school districts and other property-taxing political subdivisions.

- The Nebraska Association of County Officials should continue its quadrennial study of salaries and related recommendations.

1. Introduction

1.1 Purpose of Study

The Nebraska Department of Property Assessment and Tax (PA&T) conducts annual sales ratio studies to evaluate assessment levels and uniformity in each of the State's 93 counties and to estimate the total market value of taxable real estate in each of approximately 518 school districts organized into roughly 260 school "systems" for purposes of school aid distribution. This report reviews those important studies and makes recommendation for improvements.

The main impetus for the study was concerns that were raised by some school systems that PA&T's studies did not follow proper methodology and were not determined objectively, consistently or uniformly so that the results were thus flawed and unreliable. These school systems and PA&T jointly commissioned Almy, Gloudemans, Jacobs & Denne (AGJD) to evaluate the ratio study programs for compliance with International Association of Assessing Officers (IAAO) standards and professional practices, report findings and conclusions, and make recommendations for improvement.

1.2 What We Did

We made a systematic review of the Nebraska sales ratio studies. We interviewed key Department personnel, county assessors, and other stakeholders, including members of Tax Equalization and Review Commission (TERC) and representatives of school systems. We reviewed the various forms, manuals, reports, and other documents related to the studies. We also attended several of TERC's "show cause" hearings, in which TERC considers orders to counties to adjust values upward or downward to achieve uniformity and proportionality in assessments.

We evaluated observed practices against professional standards, particularly the IAAO *Standard on Ratio Studies* (1999) and companion textbook, *Mass Appraisal of Real Property* (1999), as well as best practices in other states.

Based on our review, we developed a draft report for review by PA&T and the school systems. The conclusions and findings expressed in this, our final report, are ours alone. Our goal is to provide an objective analysis of the current situation and our best advice for future improvements to the State's ratio studies for the mutual benefit of all concerned

Although many improvements have been made in the Nebraska assessment system in recent years and although the Department has made advancements in its programs, it is natural in a review like this to focus more on opportunities for further improvements than on past achievements. Our criticisms should not obscure the considerable achievements that have been made by the Department.

1.3 Role of Ratio Studies in Property Assessment and School Finance

Property assessment is a multiphase process involving multiple agencies. Usually, the initial assessments of ordinary real property are made by a local assessor's office. Those assessments may be appealed. The overall quality of the assessments also may be reviewed, usually by a state-level supervisory agency like PA&T. Supervisory agencies also usually help local assessors address procedural shortcomings, and they generally have the power to take action when local performance is not up to standards. These actions may include ordering reassessments and equalization (see section 1.3.4).

Ratio studies are the principal tool for objectively analyzing assessment performance. They compare assessments made for tax purposes against recent sales or (less frequently) appraisals made by an independent party or agency, generally a property tax supervisory agency. Ratio studies are used first and foremost to monitor appraisal performance at the local (county) level. Nebraska assessors can use ratio studies to determine the level of assessment for various classes and subclasses of real property, determine measures of uniformity, and in general to ensure that properties are appraised accurately and uniformly in each class and subclass.

Almost all states maintain standards of acceptable appraisal performance and conduct ratio studies to monitor the degree of compliance. Appeal and equalization boards can use ratio studies to determine equity within and among various classes of property. Property owners (or their representatives) can use ratio studies to decide whether their properties are assessed fairly and proportionately with other properties. There are two principal aspects of assessment performance: level and uniformity.

1.3.1 Assessment Level

Assessment level refers to the overall or "average" ratio at which a county, class, subclass, or other group of properties is assessed. Nebraska statutes call for an assessment level of 0.74 to 0.80 for agricultural land and 0.92 to 1.00 for all other real property.
At least three measures of central tendency are used to measure the level of assessment (LOA):

- Median ratio. The median represents the midpoint of the ratios when they are arrayed from lowest to highest. It has the desirable feature that it is little affected by very low or high ratios ("outliers"). It is the primary measure used by PA&T and TERC in evaluating compliance with LOA standards.

- Mean ratio. The mean is the simple average of the ratios. Because it is affected by outliers and has no significant advantages, the mean is often calculated but rarely used as the critical measure for decisions based on ratio studies. As noted below, it is a component in the "price-related differential."

- Weighted mean ("aggregate") ratio. The weighted mean weights each ratio on the basis of its sale price and, as such, is conceptually preferred for estimating the full market value of a property group. However, the measure is sensitive to outliers. This is the primary measure

used by PA&T in its ratio studies designed to determine LOA for school district adjusted values.

1.3.2 Assessment Uniformity

Assessment uniformity refers to the degree of equity among property owners. Achievement of an overall assessment level in compliance with mandated standards does little good if some properties are appraised at, say, 150% of market value, while others are appraised at only two-thirds of market value. There are at least three facets of appraisal uniformity:

- Uniformity among subclasses and other property groups. This can be evaluated by comparing measures of central tendency for each group. According to IAAO standards, the chosen measure of central tendency of each group (stratum) should be within 5% of the overall measure of central tendency. Judgment, of course, must be employed in defining subclasses.[1]

- Equity among individual properties. The primary measure of assessment uniformity is the *coefficient of dispersion* (COD). It measures the average percentage deviation of all the individual ratios from the median ratio. For example, a COD of 14.5 would mean that individual ratios differ, on average, by 14.5% from the median ratio. Low CODs imply equitable assessments. IAAO standards call for CODs of not more than 10-15 for residential properties (depending on their age and homogeneity), not more than 15-20 for commercial properties, and not more than 20 for vacant land. The COD for a given group of properties depends largely on the accuracy of property data and the quality of assessment procedures. Unlike deficiencies in the LOA, the COD cannot be corrected through a simple adjustment or factor. While the TERC recognizes the importance of the COD, it is both statutorily and practically unable to address poor CODs other then through subclass adjustments intended to bring LOAs into better alignment. Reappraisal is normally required to correct a deficient COD.

- Equity across value ranges. Assessment ratios should be uniform between lower- and higher-value properties. The relative over-valuation of low value properties is known as assessment *regressivity* and the relative over-valuation of high value properties is known as assessment *progressivity*. The most common measure of price-related equity is the *price-related differential* (PRD), which is calculated by dividing the mean ratio by the weighted mean (aggregate) ratio. Aside from the issue of outliers (which can distort the PRD), the closer the PRD is to 1.00, the more equitable the assessments. Even small departures can signify significant problems. IAAO standards call for PRDs of 0.98 to 1.03. Like the COD, a reappraisal is ordinarily required to address poor PRDs.

1.3.3 Reliability of Ratio Study Statistics

Reliability, in a statistical sense, concerns the degree of confidence that one has that a statistic calculated from a sample accurately describes a characteristic of the population. In other words,

[1] For the 2004 assessments, the TERC sought to ensure that each subclass of property that constituted at least 5% of the value of its class and for which there were at least 10 sales had a median ratio within the mandated window.

how confident should we be that a calculated median ratio approximates the true but unknown median for the class in question? If the calculated statistic were unreliable, it would be unwise to base equalization orders on it. Two related measures of reliability are used in ratio studies: confidence intervals and standard errors (see section 7.5 of the IAAO *Standard on Ratio Studies* for a description of these statistics). PA&T began reporting confidence intervals in 2004. Concerns remain, however, about their proper use. We address these issues in section 5.5.

1.3.4 Direct and Indirect Equalization

There are two major forms of equalization. *Direct equalization* involves changes to the assessed values that appear on valuation notices. In effect, if a state equalization or oversight body, such as TERC, finds an LOA to be unacceptable, it orders that values be factored to bring the LOA into compliance. TERC has not hesitated to exercise this authority.

In indirect equalization, the state agency adjusts assessed values in a formula not normally seen by the taxpaying public, usually for the purpose of estimating the total market value of taxable real estate in a school district as a measure of the tax capacity of the district in a school aid distribution formula. Usually, indirect equalization is employed only when a more direct form of equalization is not. Districts with lower equalized valuation per pupil generally receive more state aid than districts with higher equalized valuation per pupil. Currently the PA&T does a separate ratio study to determine the LOAs used to calculate the equalized values of school systems. School systems displeased with the results may appeal them to TERC and ultimately the courts.

1.4 Summary of Findings

PA&T is faced with huge tasks and responsibilities. We find that PA&T has executed these responsibilities reasonably well and conducts its operations in an open, professional manner. At the same time, we find that there is room for substantial improvements. We recommend a number of procedural and methodological improvements in the studies, as well as changes in the statutory environment under which the ratio studies are done and in which both PA&T and TERC operate.

Currently there is inordinate attention on the LOA of each subclass of property rather than the quality and uniformity of assessments overall. This causes assessors to focus more on bringing assessments and sales into mathematical alignment than on doing correctly the various tasks needed to get assessments right in the first place. That is, they may be tempted to "chase" sales and take similar actions to achieve good LOAs. "Sales chasing" is the unprofessional practice of revaluing the properties that happen to have sold so that their (new) assessments are at or near their sales prices, while leaving the values of other similar properties unchanged. For example, imagine that two very similar properties currently are assessed for $85,000. One of them is sold for $130,000, which would suggest a level of assessment of 65%. If the assessor revalued the sold property at $125,000 and reported the new value as the assessed value, the level of assessment would appear to be 96%.[2] .

[2] Another unprofessional practice, sometimes known as "cherry picking," is to report as usable only sales that have ratios near the target ratio.

We recommend that the legislature create a statutory environment that encourages counties to make correct assessments in the first place. Currently most attempt to do so, but some do not. By the same token, we recommend that PA&T more proactively monitor the uniformity of assessments and recommend to TERC where, in its considered opinion, either the level or uniformity of assessments is unacceptable and requires correction and that TERC should be given clear authority and responsibility to order reassessments, as well as to make equalization adjustments.[3] Appropriately, the TERC is not staffed to conduct the data, statistical, and background analyses required to determine whether underlying problems exist in each county, class, and subclass of property in the state or among counties, and it should not have to consider adjustments for subclasses of property for which the Property Tax Administrator has not discerned an underlying problem. For the most part, TERC should act as a judicial body.

The direct and indirect equalization studies performed by PA&T should be consolidated or brought into better alignment for the benefit of all concerned. We suggest several possibilities.

Section 2 below describes the legal and institutional background for property assessments, ratio studies, and equalization in Nebraska. Section 3 focuses on data assembly and reporting, section 4 on PA&T's assessment practice reviews, and section 5 on important technical issues. Section 6 summarizes our recommendations.

[3] TERC would seem to have this authority under section 77-5017.

2. Background and Setting

This section examines the legal and institutional features of the property tax system that have implications for sales ratio studies and equalization.

2.1 Legal Framework

2.1.1 Assessment Standards

The statutes governing property assessment and taxation are found chiefly in Chapter 77 of Nebraska Revised Statutes. The chapter is divided into articles, which in turn are divided into sections. Section references are given in parentheses or in footnotes.

The legal framework for property taxation in Nebraska provides for most key elements of a good market value-based assessment system for real property:

- The constitution requires that property taxes be uniform and proportionate. Article VIII, sec. 1 requires that properties taxes be levied "uniformly and proportionately, and sec. 6 provides that "the legislature may prescribe standards for and methods for the determination of the value of real property at uniform and proportionate values."

- Assessments are to be based on "actual value," which essentially is synonymous with market value.[4]

- Property is to be assessed annually[5].

- Unless entitled to an exemption, assessments are to be 100 percent of actual value, except in the case of agricultural land, which is to be assessed at 80 percent of actual value[6].

- Notice is required for any change to an assessment[7].

It might also be noted that section 77-1339 authorizes two or more contiguous counties to enter into an agreement for joint or cooperative performance of the assessment function. Counties are not necessarily the most logical basis for organizing the assessment function, and Nebraska's 93 counties present a special problem for ratio studies. This is especially true when attempting to determine a LOA in political subdivisions that overlap county boundaries. The small number of parcels in many counties can make it difficult to justify the staff and budget required to operate a well-run, professional office with modern systems and technology. In addition, many counties are too small to generate the data required for both accurate valuations and reliable sales ratio studies.

[4] Sections 77-112 and 77-201.
[5] Sections 77-1301 and 77-1303(1).
[6] Section 77-201(2).
[7] Section 77-1315(2). Some assessment officials apparently regard this requirement, which gives rise to the right of appeal, as discouraging reassessments and equalization actions.

Section 77-1340 authorizes counties to request the PA&T to perform the assessment function (the costs for the assessment offices are borne by the state). Currently the Department has accepted this responsibility for nine counties. Because of state budget limitations, the Department has had to refuse similar requests from several other counties.

2.1.2 Monitoring Assessment Performance Generally

In addition to the ratio study statutes discussed in section 2.1.3, the statutes give the Department ample authority to monitor local assessment performance. Section 77-1301.01 gives the Property Tax Administrator (PTA) authority to promulgate rules and regulations for the appraisal of classes and subclasses of property and to establish standards for appraisal contracts. No appraisal contract is valid until approved by the Department. Section 77-1330 contains similar language, again authorizing the PTA to prepare and issue "rules, regulations, manuals, and directives" to county assessors. The PTA is authorized to examine the records of counties to ensure that rules and guidelines are being followed and to "seek to order a county or county assessor to take corrective measures to remedy any failure to comply" with requirements. If deficiencies are not corrected, the PTA can assume the assessment function for the county and bill the county for costs.

Section 77-1331 requires the PTA to maintain and enforce standards for uniform property record cards, assessment files, and tax rolls, although it should be noted that the PTA cannot require the use of specific hardware or software as long as the county's chosen system produces data and reports in compliance with rules and regulations.

Section 77-1377 directs the PTA to maintain a statewide sales file of hard-to-assess properties. While seemingly useful, assessors have been reluctant to use sales from other counties, probably due to fears that county boards of equalization will not support values derived from market evidence from other counties. This is unfortunate in that the market for larger commercial properties transcends county and other political lines.

The law contains a few provisions that potentially complicate the appraisal process and that have ramifications for the sales ratio study program. For example, section 77-202(2) requires assessors to disregard any increment in value associated with roadside trees.

2.1.3 Ratio Studies

Current statutes require PA&T to perform two ratio studies each year: a ratio study of each county and class of property therein and a ratio study for each school district or school system. These studies are the subject of separate statutory sections and have separate time frames. The Tax Equalization and Review Commission (TERC) uses the first study as the basis for direct equalization actions, while the second study is a classic example of a ratio study made for "indirect equalization" as described in 1.3.4 above.

Section 77-1327 governs both ratio studies. As mentioned, the purpose of the direct equalizations study is to ensure that each class of property (residential, commercial, and agricultural) in

each county is assessed within legal requirements. In this regard paragraph (3) of 77-1327 provides as follows:

> "The Property Tax Administrator annually shall make and 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 the property tax in each county. The comprehensive assessment ratio studies shall be developed in compliance with professionally accepted mass appraisal techniques…."

REG-60-004 sets out key dates for the study. On or before March 20, assessors are required to complete and certify to the Property Tax Administrator the County Abstract of Assessment Report for Real Property, which includes the current year's assessed value for properties listed in the State's sales file. Using these values and previously compiled sales data, PA&T performs a ratio study for each of three major classes of property (residential, commercial, and agricultural) in each county. The study uses two years of sales for residential property (e.g., July 2001 through June 2003 for the 2004 study) and three years of sales (e.g., July 2000 through June 2003) for commercial and agricultural property. Based on study results, as well as its ongoing review of assessment practices in the counties, the PA&T prepares the Reports and Opinions of the Property Tax Administrator, which set forth a determination of (a) whether the level of assessment for each class complies with statutory requirements (0.92 to 1.00 for residential and commercial properties and 0.74 to 0.80 for agricultural land) and (b) whether the quality of assessments is acceptable. The median ratio receives primary weight in determining compliance with the required level of assessment, although the Property Tax Administrator may emphasize an alternative measure of central tendency or consider additional information.

The Reports and Opinions must be issued by April 5, which leaves a far too narrow window of only 15 calendar days to conduct the ratio study, formulate conclusions, and prepare the required reports. Fortunately, LB 973 (signed into law by the Governor on April 1, 2004) extends this to 19 calendar days, which we still find to be an unusually short and inadequate time.

The PA&T presents its findings along with supporting calculations and analyses to the counties and to TERC. TERC reviews these reports, conducts hearings, and makes a determination of whether each class of property in each county is in compliance with required standards by May 15. In cases where it finds a category of property is assessed outside of LOA requirements, TERC orders an increase or decrease in values calculated to bring the median ratio to the middle of the required window (0.96 in the case of residential and commercial properties and 0.77 for agricultural land). Affected counties must re-certify their County Abstract of Assessment Report for Real Property to the Property Tax Administrator by June 5.

Certified assessed values as equalized by TERC are the basis for valuation notices that are required to be mailed by June 1. Property owners may appeal these values to county boards by June 30 and, if still dissatisfied, to TERC.

Section 79-1016 sets forth the timetable for the indirect equalization study used to determine full market values for school aid distribution purposes. On or before August 25 county assessors are

required to certify to the Property Tax Administrator the total taxable value of each school district in their county. By October 10 the Property Tax Administrator must "compute and certify to the State Department of Education the adjusted valuation for the current assessment year for each class of property in each school district and each local system." At present there are 1,242 such county-school system study areas in the State.

REG-80 defines procedures for the school district study. Two years of sales are used for residential property and three years of sales for commercial and agricultural property (the time frames are the same as in the direct equalization study). Primary emphasis is placed on the weighted mean or "aggregate" ratio. However, if the Property Tax Administrator determines that outliers distort the weighted mean, he or she may use an alternative or base the ratio on other available information.

A school district dissatisfied with the PA&T's findings, may appeal to the Property Tax Administrator by November 10 and then to TERC within 30 days of the Property Tax Administrator's final determination.

2.1.4 Reports and Opinions

As noted above, annually PA&T must report its opinion of county assessment performance to TERC to help the Commission discharge its equalization responsibilities. Using a standard format, PA&T reports on each county separately. The report begins with a preface setting forth the statutory basis and purpose of the Reports and Opinions. The preface emphasizes that determinations are not based on statistical results alone:

> "… just as the valuation of property is sometimes more of an art than a science, a narrative analysis of assessment practices in each county is necessary to give proper context to the statistical inferences of the ratio study. There may be instances when the analysis of assessment practices limits or outweighs the reliability of the statistical inferences of central tendency or quality, thereby requiring an opinion of the level of value that is not identical to the statistical point estimate."

The preface is followed by a table of contents, a summary of the report sections, and a one page "Opinion of the Property Tax Administrator" for the county. The latter contains a succinct two-sentence summary for each of the three major property classes. The first states the PTA's opinion of the level of assessment and the second states whether the PTA deems the "quality of assessment" to be acceptable.

The main body of the report begins with a "Correlation Section" which contains a number of analyses for each property type. These include:

- Analysis of the percentage of sales used. Assessors are responsible for determining whether sales are valid or not for purposes of the ratio study. This section of the report indicates the number of sales that occurred for the class, along with the number and percentage determined to be usable. An unusually high percentage could indicate that the county has been negligent in screening sales, while an abnormally low percentage could

indicate excessive disqualifications in order to achieve a desired (unrepresentative) ratio result.

- Preliminary, trended, and "R&O" median ratio. The preliminary median ratio is based on the prior year assessments and the R&O ratio is the Reports and Opinions ratio determined by the PTA. If the county has changed values for sold and unsold properties similarly, the trended median ratio should be close to the R&O ratio. A significant difference could indicate selective changes to sold properties to bring the LOA into compliance.

- Analysis of percentage changes for sold properties versus all properties. The average change in value between the prior and current year for properties sold in the most recent year is compared with the average percentage change in value for the entire class (exclusive of new construction) as reported in the county's Certificate of Taxes Levied (CTL) Report. As in the prior analysis, a significant difference could indicate setting values for sold properties so as to achieve compliance with LOA standards.

- Analysis of R&O median and aggregate (weighted mean) ratios. As discussed, the median ratio assigns equal weight to each ratio, whereas the weighted mean weights each ratio based on its sale price. Thus, a substantial difference between the two measures tends to indicate price-related biases in assessment practices, in which case the PRD may fail to comply with IAAO guidelines (see 1.3.2 above).

- Analysis of reasons for change in ratio statistics. Prior and R&O ratio statistics are compared. Differences between the two sets of ratios should be explainable in terms of market trends and assessor's actions. An increase of LOA measures in the absence of reappraisal activity could indicate manipulations to the sales or selective changes in value for sold properties.

The correlation section of the report is followed by the statistical reports, a section summarizing assessor actions (including special "focus reports"), a county reports section (including the county's 5-year plan and the Department's most recent progress report for the county), maps, a glossary of statistical terms and acronyms used in the report, and various other documentation, including statistical formulas and the parameters for sales used in the report.

As can be seen, the Reports and Opinions is a comprehensive document that sets forth the Department's conclusions as to LOA and assessment quality, along with a wealth of supporting statistics and analyses. That the Department is able to assemble such a comprehensive analysis for each county in the very narrow 15-day (now 19-day) time frame is most impressive. Unfortunately, other than to say that the quality of assessments is acceptable or not, the report stops short of reaching any conclusions, such as noting a county's failure to comply with COD standards or finding that a subclass is out of compliance with LOA requirements, and similarly stops short of recommending whether reappraisal action is needed.. Thus, TERC is left to make such determinations without the formal opinion or recommendation of the PTA. Having completed so detailed an analysis, the Department would seem to be in a considerably better position to make such initial determinations and should do so. To be sure, current procedures follow existing statutes and the Department has inadequate time to make such determinations. Still, we perceive

that the Department's skills are not being used to full advantage and that TERC must undertake analyses and make initial determinations for which the Department is better equipped. We recommend that statutes be modified to charge the Department with the responsibility of recommending equalization and reappraisal orders and that TERC be charged with the responsibility of conducting hearings on and issuing (or not issuing) such orders.

2.2 Institutional Framework

As with most other states, responsibility for property tax administration is divided between local and state government. Here we consider the roles of county offices, the Department of Property Assessment and Taxation, and the Tax Equalization and Review Commission. Although their work impinges on equalization, we do not pursue the role of eight regional Agricultural and Horticultural Land Valuation Boards in depth.

2.2.1 Fiscal Setting

The objective of any fiscal system is to raise revenue to support the common good in as fair a manner as possible. In the case of property taxes, except for exemptions and other explicit departures, statutes require that assessments and corresponding taxes be based on the market value of the property being assessed. Because local property taxes are a mainstay of school finance, states attempt to equalize available funding through aid formulas paid from state-level revenues. In Nebraska and many other states this scenario is complicated by limits on local government budgets and revenues. These limits, coupled with limited revenues and competing budget demands at the state level, translate into fiscal stress, as taxing bodies attempt to cope with limited funding resources and ever-increasing local costs and demands.

In Nebraska available state aid is based on an entitlement pool that (since 1998) is formula-driven rather than arbitrarily set each year by the legislature. The state determines the funding level required to provide an 'average cost per pupil' education in each school system based on a complex set of factors, including number of students, student mix, and local costs. State aid is computed as the difference between this 'average cost per pupil' funding need and potential revenue other than state aid. Those potential revenues include the property tax revenues that would be generated by a levy of $0.95 per $100 of equalized valuation (as determined by PA&T). The $0.95 factor is, by law, ten cents less than the levy limit on school systems (currently $1.05 per $100 of assessed valuation). Because of budget problems, the State recently increased the school system levy limitation from $1.00 to $1.05 per $100 of assessed valuation, thereby automatically raising the state aid 'levy factor' from $0.90 to $0.95 per $100 of equalized valuation. This formula factor increase means that each school system could generate more local revenue and would be eligible for less state aid. Most school systems are at ot near the maximum levy limit of $1.05 per $100 of assessed valuation.[8] General state aid to school districts for 2004-2005 will be approximately $634 million, about 32% of K-12 funding.

As can be seen, school districts are tightly pinched in efforts to improve local schools. With the ability to raise funds from the property tax limited, school aid is critical in providing necessary

[8] On the other hand, some 30 school districts get no state aid because their equalized valuation base is so high. Bonding is not subject to levy limits.

resources. Against this backdrop, the importance of PA&T's determinations of LOA and equalized local value can be appreciated. For example, if PA&T determines that a school district's LOA is 0.93 versus 0.98 the previous year, the district will have to raise more local revenue through property taxes before it is eligible for state aid and, if the district fails to do so or is at the maximum levy limit, its aid could well decline or even disappear.

As will be seen in more depth in section 5, determination of the full market value of school districts is a challenging task complicated by the plethora of school districts and local segments falling in two or more counties. Moreover, a district need not consist of a contiguous group of parcels. In all, there are some 1,242 study areas and all three statutory strata (agricultural, residential, and commercial) must be studied in each. Many of these have very limited market data, making statistically valid ratio studies according to generally accepted mass appraisal techniques difficult and making LOA determinations subject to high variability from year to year. PA&T is aware of this potential for variability and attempts to keep LOA estimates relatively stable from year to year, but the accuracy of both the current and prior year's number is often far less reliable than desirable.

Of course, consolidation of assessment and school districts would help alleviate the situation and increase sample reliability. Some efforts have been made in this direction; we would endorse further improvements in this area.

2.2.2 County Assessors and Boards of Equalization

Apart from utilities, interstate carriers, and regulated properties, elected assessors are responsible for the assessment of real and personal property in their counties. However, as discussed, statutes provide for the assumption of that responsibility by the state in certain instances, and the state is currently responsible for assessment in nine of Nebraska's ninety-three counties.[9]

Statutes define the county assessor's responsibilities, and counties must adhere to standards set by the state. A key provision is the requirement in section 77-1311(8) that assessors develop and update annually a five-year plan to ensure adherence to the annual assessment requirement. A major facet of such a plan is a schedule for re-inspecting property. Reinforcing this, section 77-1318.01 requires a property owner to notify the county assessor of physical changes that cost at least $2,500.

Despite the importance of the property tax to local governments, budgets are tightly limited and sometimes inadequate.[10] Some counties experience difficulties in finding candidates for the office of assessor. Every four years since 1981 the Nebraska Association of County Officials has developed a study of minimum salary recommendations for county assessors. As would be expected, the recommendations take into consideration the size and complexity of the county, cost of living, and other factors. Although the recommendations express only the *minimum*

[9] Section 77-1340.

[10] Some states address this issue by making stakeholders partly responsible for funding and governing assessment districts. For example, in Iowa and Texas, local boards with stakeholder representation approve budgets and funding. In Florida, counties must fund budgets approved by the Department of Revenue. Kentucky partially funds assessment administration.

salary that might be required to potentially attract and hopefully retain qualified assessors, they provide a helpful benchmark to county boards. We are impressed with the depth and care of the study and recommend that it be continued. We also hope that county boards will give strong consideration to study recommendations. Sometimes a relatively modest salary differential can make a critical difference in the quality of assessments and the effectiveness and efficiency with which property is appraised.

As in many other states, assessors may hire contractors to assist in the discharge of their duties. Several firms provide system and revaluation services. About fifty-five counties, including the nine counties that the state assesses, make use of the TerraScan system. This system serves treasurers as well as assessors. Other counties, including some of the larger, have other systems.

Most assessors rely on the cost approach.[11] This is understandable for classes of property for which there are few sales or for which rental income and expense data either do not exist or are difficult to acquire. However, extra steps are needed to keep cost-approach values in line with current market levels, and cost models are inherently difficult to fine-tune. Thus meeting ratio study uniformity standards is more challenging.

2.2.3 Department of Property Assessment and Taxation

The Property Tax Administrator and the Department of Property Assessment and Taxation, which she heads, have most of the duties expected of a property tax supervisory agency. In particular, the administrator is required to "measure assessment performance in order to determine the accuracy and uniformity of assessments."[12] The sales ratio study is integral to carrying out this responsibility.

Through its power to adopt and promulgate rules and regulations, the Department has considerable power in setting the standards and procedures used by counties in assessing real and personal property. Specific powers and duties include:

- Prescribing many of the forms required in property tax administration
- Training and certifying county assessors
- Approving reappraisal contracts
- Issuing an annual report

Moreover, the Department is responsible for assessing public service entities. Similarly, it is responsible for assessing and equalizing the operating property of railroads, carline companies and air carriers.

The Department has five divisions and several regional offices connected with its original assessment responsibilities as well as its supervisory responsibilities. The Measurement Division is responsible for the ratio studies and the other supervisory activities. Its staff includes an administrator, three supervisors, and eleven "liaisons." The liaisons are crucial, and most state supervisory agencies have comparable positions. They monitor county assessment performance,

[11] Some of the larger counties rely more on direct market models based on actual sales.
[12] Section 77-702(2).

collect 521s, and help solve problems. By policy, they are not tightly governed, as the division subscribes to the principles of the "Gallup path to business performance" espoused by the Gallup Organization. Certainly, this path has theoretical appeal (the right people in the right roles with the right managers), and the liaisons we met exhibited considerable dedication and professionalism. On the other hand, the assessors we met expressed some concern about uneven treatment. The nature of our engagement was such that we can make no firm judgments, other than to note that such concerns arise in other states. However, in section 4.2, we offer a recommendation for bringing greater consistency to assessment practice reviews.

Being cognizant of its limitations and tenuous political situation, the Department has moved cautiously and deliberately in its efforts to improve local assessment performance. It prefers gentle suasion to confrontation and seeks to avoid unsustainable actions. Naturally, some observers believe that the state is too deferential to counties. Others have the opposite view.

2.2.4 Tax Equalization and Review Commission

The Tax Equalization and Review Commission (TERC) was established by a constitutional amendment in 1996. It replaced the State Board of Equalization, which was composed of the governor and other top elected officials serving ex officio. This was progressive, because such boards seldom have the time, inclination, and expertise to tackle tough assessment issues. The TERC is a full-time body with four members, who must have relevant backgrounds and who serve for overlapping six-year terms. Essentially, TERC has a dual function: to equalize assessments and to hear appeals from county boards of equalization and of assessments made by the Department. The bulk of its year is spent on appeals.

TERC plays a pivotal role in the Nebraska property tax system. Short of the courts, it is the final arbiter of assessments and determines equalization orders. Until 2004, when it issued about 40 orders, TERC has issued about 10 equalization orders per year (nine were issued last year). TERC determines what information it needs to assist in this process and requests the PTA to provide the necessary analyses, statistics, and reports. TERC also hears appeals of the LOA determined by PA&T for school districts.

Section 77-5022 states that "The Commission shall annually equalize" assessments and section 77-5023 states that "The Commission shall have the power to increase or decrease the value of a class or subclass of real property in any county or taxing authority or of real property valued by the state so that all classes or subclasses of real property in all counties fall within an acceptable range." Aside from agricultural and horticultural land eligible for special valuation under section 77-1344, the acceptable range is defined as 74% to 80% of actual value for agricultural and horticultural land and 92% to 100% of actual value for all other real property. Section 77-5023 further directs TERC to equalize values to the center of the acceptable window, although LB 973 (effective for 2005 values) provides that this "may be determined to a reasonable degree of certainty relying upon generally accepted mass appraisal techniques." In making a finding that a county is not in compliance with section 5023, the Commission relies on the reports and opinions of the PTA (see section 2.1.4). Pursuant to section 5026, the county is invited to show cause why an equalization order should not be issued. After a hearing, TERC makes its equalization determination.

TERC has generally interpreted the above provisions to mean that, barring obviously inadequate data or other special circumstances, it must order adjustments when the median ratio falls outside the acceptable range. We do not agree. While 77-5022 requires TERC to equalize values annually and 77-5023 gives it clear "power" to increase value for any subclass of property outside the acceptable range, we do not think that the law requires that this be reduced to a mechanical process of ordering changes whenever the chosen measure of LOA falls outside the range. As in any decision-making process, one must first determine whether the evidence is convincing. To take an obvious example, assume the following 11 ratios for a nonagricultural class or subclass: 0.66, 0.74, 0.77, 0.81, 0.86, 0.90, 0.94, 0.98, 1.06, 1.13, and 1.24. The median ratio (upon which TERC relies) is 0.90, outside the required window. Is there convincing evidence that the *true* LOA for the *entire* class or subclass is deficient? Clearly not. The data reveal such disparate LOAs that it is essentially impossible to say with any reasonable certainty what the level of assessment for the entire class or subclass is[13] Although most cases are not this obvious, one can appreciate that statistical analysis is required to determine whether there is reasonably convincing evidence that the required LOA has not been achieved. We take up these issues more completely in section 5. For now, we conclude that 77-5022 and 77-5023 should not be read as requiring equalization whenever the chosen measure of LOA falls outside the required range. Such an interpretation is simply not consistent with generally accepted mass appraisal techniques and professional standards and breeds an unhealthy emphasis on manipulating the data to get the statistics inside the required window rather than focusing on full market value and the uniformity of values. As we discussed at the conclusion of 2.1.4, we recommend that PA&T be charged with making these determination and that TERC act in a judicial capacity in reviewing these recommendations, much as it currently does in the case of appeals of the LOA determined by the Department for school aid purposes.

[13] Rather than applying an equalization factor, a more appropriate action in this case would be a review or reappraisal of the affected properties.

3. Data Assembly and Reporting

This section addresses the acquisition, screening, and processing of sales data. It discusses the PA&T database and the electronic transfer of data between the counties and PA&T,

3.1 Sale and Assessment Data Acquisition

Before a deed can be recorded, the parties must file a real estate transfer statement (form 521), which is a four-part form, with the county register of deeds. To provide a control, copies of the forms follow different processing paths.

The register collects the transfer tax and receives the form. Within fifteen days after the end of the month in which the deed was recorded, the register batches the white (original) copies of forms received during the previous month and transmits them to the Department of Revenue, which after processing the tax payments sends the forms to PA&T. The PA&T creates a sale record in the sales database. The white copies of the 521s are stored.

At the end of the month in which a deed was recorded, the register transmits the other copies of the form to the assessor, who must, within forty-five days of receiving the form, qualify the sale, adjust the sale price if necessary, fill out a worksheet ("greensheet"), attach the pink copy of the form 521, and send the package to the PA&T via the liaison.[14] Information provided includes the assessed value at time of sale (which for sales in the later part of the year may be either the prior or new assessed value), the assessor's decision about the usability of the sale, and various property descriptors. The liaisons screen the packages of forms, batch them, and send them to Lincoln, sometimes after a delay.

When PA&T headquarters receives a batch of sales records from liaison, usually within three months of the sale being recorded, the sale record is updated. At this point, the transfer is officially recognized by PA&T.[15] Sales reported on white-copy 521s that are not reconciled to subsequent greensheet reports are reported to liaisons for research. Two members of PA&T's staff enter sales data full time; temporaries are used as necessary. A few counties transmit sales data electronically (see 3.4 below). After the sales file is updated, pink copies of forms 521 and supplementary material are stored.

For ratio study purposes, a sales year runs from 1 July to 30 June of the following year. Each year's file is frozen at the end of the year. However, two or three years of sales are used in each annual study, and a version of each previous year's file is updated with the current year's assessed values.

At points during the year, PA&T produces lists of sales considered usable called "rosters." Rosters are sent to assessors for their review and as a turnaround document on which additional information is inscribed. One roster is generated in September to allow assessed values to be updated, deal with omissions and errors, and finalize usability. Updated rosters are returned to

[14] Presumably, the assessor also creates a sale record.
[15] The "posted" date in a sale record is when the greensheet data are entered.

Lincoln so that the sales file may be updated. Afterwards, updated rosters are sent to liaisons and assessors for quality control and reference purposes. This process essentially is repeated in November, and shortly thereafter preliminary ratio study statistics are generated for the following year.

The process of completing, reviewing, transmitting, and entering data from 521s and greensheets is time-consuming, and much of the data on property type and characteristics would be redundant if counties were required to file excerpts of their property records. This information would facilitate comparisons between sold and unsold properties (as discussed later). We recommend that the Department begin thinking in terms of streamlining the greensheets and providing for the routine electronic transmittal of complete extracts of data from the assessment rolls. A number of other states, including New York, Florida, and Arizona have such provisions. These issues are discussed in more detail in later sections of the report.

We also recommend that steps be taken to maximize the utility of the collected sales data, especially to the jurisdictions where such data are extremely scarce.[16] We recommend that a systems analysis be undertaken to identify the data needs of the various participants in the state property tax system and to develop a strategy to meet them most cost effectively, perhaps by routinely updating a sales file of selected characteristics for types of property identified by users as difficult-to-appraise. As we noted in 2.1.2, the fact that a sale is from another county should not dismiss it from use in the comparable sales approach, and boards should not hesitate to consider such sales if they are otherwise comparable to the subject property.

3.2 Sales Screening and Processing

Commendably, the PA&T has produced a sales file procedures manual for assessors. It contains sections on processing real estate transfer statements (521s), sales worksheets, rosters, and other things germane to the ratio studies and equalization.

Section 77-1327 establishes the principle that all sales are to be deemed usable unless determined otherwise under professionally accepted mass appraisal techniques, such as the IAAO *Standard on Ratio Studies*. County assessors initially screen sales. The county liaisons review the assessor's handling of sales. In their review of sales, they pay particular attention to sales that are likely to influence the ratio statistics for a stratum. However, they seldom override the determinations of county assessors. An override may be appealed to the PTA.

The Department has retreated from detailed guidelines on sales screening, preferring instead to let assessors make that judgment. Although the 521s, if properly filled out, would provide most of the information needed to identify a specific reason for disqualifying a sale, current processing procedures call only for a usable-unusable determination. Since county assessors are not required to explain their decisions (except when they adjust reported sales prices), reviewing them is difficult. This increases the possibility of an unscrupulous assessor's improperly excluding usable sales. We recommend that PA&T develop and require use of a set of specific reason

[16] We understand that local assessors currently have the ability to request that their PA&T field representative query the sales database on their behalf for such purposes, but this indirect capability falls far short of an idealized system, such as the ASSET shared environment system being implemented in Alberta.

codes for disqualifying a sale for ratio study purposes. Guidance contained in the IAAO standard would provide a useful starting point for this purpose.

3.3 PA&T Database

The databases used by PA&T constitute an accretion of 15 different databases in several formats (variations of Foxpro and Access), of which four are used in the generation of the department's annual Reports and Opinions. The parcel-level data come mostly from the previously discussed sales reporting forms, with data elements supplied by parties to the transaction and potentially modified by both local assessors and the department's own field personnel. Additional, aggregated data come from the County Abstract of Assessments (Form 45) and the Certificate of Taxes Levied, which distinguishes aggregate value increases attributable to new construction from those due to revaluations of existing property, although these data are not available at the parcel level. Appendix 1 contains a list and description of the data fields encompassed in the department's Data Dictionary and accessible to authorized personnel via a query tool. Movement away from the current PC-centric databases toward a more robust SQL database is a departmental objective.

A number of strengths of the system are worthy of note. The responsible information-technology staff member has taken reasonable steps to ensure the security and integrity of the data and the reports that are generated from it. Commendable provisions, among others, include (1) a facility for local assessors to submit required information electronically so as to minimize the likelihood of error and the need to handle paper at both ends of the submittal process[17], (2) a reasonably powerful inquiry and reporting tool for use by field personnel (and, through them, local assessors) in accessing the sales data in the databases, and (3) the watermarking of all "office-use-only" reports and queries to reflect the fact that they are not official.

The department's voluminous reports and opinions (2.1.4) are produced electronically in the paper-mimicking portable document format (PDF) as well as on paper. Unfortunately, these PDF files, which can run into thousands of pages, lack the hierarchical/navigational cues that would facilitate their use. Being presentation oriented rather than analysis friendly, they also suffer from the defect of offering no opportunity for the reader to extend the analysis of the data they report.

The retrievability of historical data is a significant concern with the database. As noted, the reports themselves are preserved in an electronic format that commendably allows for easy dissemination but poor specific access to relevant sections of the report and no further analysis of the data underlying the conclusions of the report, even if some of those data are incorporated in the PDF text. Although the database makes provision for recording the assessment both as of the date of sale and for the current year (see lines 32 to 52 in Appendix 1), so as to facilitate their comparison over the multiple years that the sale may be used in the ratio study, it was not possible to retrieve these data for a sample of counties identified for analysis in connection with this project.

[17] At present the updating of such data can be accomplished in this manner. The additional step of facilitating its original submission in a similarly convenient format is to be encouraged.

Furthermore, suspicions have been voiced that some assessors have learned how to cheat the system, making it all the more important that this capability be available. The issue of selective changes to the assessed values of sold properties to make ratio study statistics appear good (know as "sales chasing") is discussed in section 5. For now we note that detecting and adjusting for sales chasing is facilitated by the availability of data on each parcel's assessment, most recent sale, and salient characteristics (such as use type, year of construction, size, and so forth). The availability of such data makes it possible not only to facilitate sharing of sales data among jurisdictions where there are few sales but also to analyze the representativeness of sales and to monitor sales chasing by comparing value changes for sold and unsold properties of the same type and location. As a long-term but high priority matter, we recommend that the department work to ensure that it be routinely provided with electronic, analyzable copies of the local assessment rolls incorporating parcel identifiers, assessed values, and salient property characteristics. Although this would place an additional burden on local assessors, it would also free them from submitting much of the information now tediously transcribed onto greensheets.

The programming for departmental statistical analyses is embedded in specially written program modules implemented in dynamic link libraries (DLLs). No use is made of generic statistical software, such as SPSS, SAS, S-Plus, or a variety of other commercially available packages. It thus is somewhat problematical to explore the consequences of varying the parameters of the analyses. For example, implementing the outlier trimming procedure recommended by IAAO (see section 5) would be difficult using the current DLL approach, but easy to implement if a statistical package were available. As a low priority we recommend obtaining and interfacing a standard statistical package for use in sales ratio and statistical analyses.[18]

3.4 Electronic Transmittal of Data

Local assessors have four formal interactions with the equalization system's sales database: (1) the submittal of Form 521, (2) the September sales roster, (3) the November sales roster, and (4) the Assessed Value Updates. Assessors can submit the last three of these databases (but not the first) electronically, in a PA&T-devised format. This reduces the overall manual labor involved, since paper-based forms are eliminated, and greatly minimizes the likelihood that irresolvable transcription errors will occur. Three counties currently provide data electronically. A similar system for submitting the original sales data has been suggested by local assessors and is currently under discussion among the stakeholders.

Electronic submission of assessment rolls, preferably augmented by selected property characteristics as described above, is not currently done. We recommend that the possibility be pursued on a number of grounds: It will help increase equity among the jurisdictions by helping to expose and eliminate the sales chasing activities of the few counties that engage in this perverse practice, it will help ensure that samples used for equalization purposes can be made as representative of the universe of properties to be equalized as possible, and it will provide a more effective means of maximizing the availability of scarce sales resources for counties that are deficient in this regard.

[18] The package could also be used to develop time adjustments for historical sales prices and to explore the consequences of the recommended shift from using contemporaneous assessments divided by historical sales prices to using pre-assessment sales prices, factored up by roll growth, divided by time-adjusted sales prices.

A number of changes will be required before electronic transmission of assessment roll extracts can be made a reality. The Department must first complete migration to Access XP and SQL. In addition, required characteristics and suitable file formats must be identified and counties and their vendors must develop programs to produce the required files. However, given the potential advantages and efficiencies, we recommend that PA&T and stakeholders move firmly in this direction. Experience in addressing privacy as well as technological issues is available from other jurisdiction, such as Alberta, which also has a multitude of small rural jurisdictions with very few sales and a diversity of computer-assisted mass appraisal (CAMA) systems.[19]

[19] CAMA systems are the software used by assessors to maintain property data and make assessments. Such software may be developed in-house or obtained from private vendors.

4. Assessment Practice Reviews

4.1 Introduction

Nebraska is one of about twenty-two states that use assessment practice reviews (performance audits) in conjunction with ratio studies as a general monitoring tool. State audit programs vary widely in scope and approach. Audits range from comprehensive, well-documented audits (such as California's assessment practice surveys) to selective audits whose documentation essentially consists of a completed questionnaire (Oklahoma and Kentucky).

The usefulness of audits can be increased by monitoring revaluation activity as it is being carried out (as in Massachusetts and New York) rather than after it is completed. Another innovation is to involve local governments in the auditing process (as in Alberta and Connecticut). Although they may test the accuracy of assessment data and consider efficiency of assessment operations, performance audits generally focus on the systems and procedures used by an assessor. With respect to the appraisal program, the premise is that, if the practices conform to legal requirements and professional standards, the resulting appraised values will be accurate reflections of the underlying market values. Thus, an audit provides indirect evidence of the validity of the assessments. Sometimes audits are used in lieu of ratio studies when sales are insufficient or largely irrelevant (such as when assessments are based on artificial standards such as current use-value and when personal property is appraised on the basis of declarations).

4.2 Nebraska's Program

In addition to sales ratio study results, the Property Tax Administrator's Reports and Opinions in the "assessment actions" section consider information about local assessment practices. A responsibility of PA&T's liaisons is to monitor year-to-year changes in assessed values and to monitor assessment practices generally. As the Department's eyes and ears, they visit each county in their assigned areas periodically. They also attend regional assessor meetings.[20]

In addition, county assessors supply PA&T with factual information about their operations on a survey questionnaire (form 96-223-2003) in conjunction with the annual abstract for real property (form 45). The nine-page questionnaire replaces interviews formerly conducted by the liaisons. The questionnaire contains sections about:

- Staffing and budgets

- Computer support (that is, the vendor, if any supplying the CAMA system, administrative software, GIS, and personal property software)

- Contracted services (administrative and appraisal, including the contractor's name, the amount of the contract, and the expiration date of the contract)

[20] The assessors' association has divided the state into five regions.

- The status of mapping and zoning

For the various categories of property, the questionnaire solicits information on:

- Who collects property characteristics data, who does valuations, and who does "pickups" (new construction).

- Reappraisal and valuation dates (including the date of cost manuals and depreciation schedules)

- The number of market areas.

- Annual maintenance work loads (number of permits and information statements)

Finally, the questionnaire solicits comments from the assessor.

The staff of PA&T considers the information in the questionnaire, the details of the assessor's five-year reassessment plan, and impressions gained during contacts with the assessor's office and prepares each year a "progress report" for each county. The report highlights recent achievements and areas where additional work appears warranted.

Based on our interviews and available documentation, it appears that practice reviews are deliberately unstructured and impressionistic. This allows the Department to focus and report on current needs and areas of concern. However, the inconsistencies fuel assessors' suspicions of unequal treatment, especially with respect to state-assessed counties. To mitigate such concerns and to increase the general usefulness of the assessment practice reviews, we recommend that PA&T develop a standard structure for the reviews, including an assessment practices review manual that explains how to evaluate or score each item. Management should ensure that liaisons use the manual and uniformly evaluate county practices. .

5. Technical Issues

5.1 Background

There are a number of important technical issues concerning the statistical validity of both the direct and indirect ratio studies conducted by PA&T that we will discuss below. The most critical is sample size and representativeness. Basically, despite the multi-year time frame for sales used in the studies, all too often there is too little data to determine assessment levels or other performance measures with an acceptable degree of reliability. This is especially true in the school aid studies, in which PA&T must determine and certify an estimated market value for each of the three classes of property in each of 1,242 study areas for school districts or local systems (3,726 categories in all). PA&T has largely addressed this problem by imputing ratios from results observed countywide or from studies of county assessment practices. While reliable determinations are possible in the larger school districts, estimated market values must be inferred in this manner for a considerable majority of the 3,726 categories.

On the positive side, informed and reasoned opinions about LOAs are preferred to "letting the numbers fall where they may," which would create unacceptable sampling errors and wide year to year swings in estimated market values, particularly in the smallest categories. Indeed, in many categories, there are no commercial or agricultural sales!

One solution to this dilemma would be for PA&T to conduct or contract for "expert appraisals" to augment available sales. While this has merit if done judiciously, the appraisals would themselves be limited by available market data and would constitute only another *opinion* of value, which could be as contentious as the assessor's appraisal. A large number of such appraisals would be required to ensure representiveness and to bolster sample sizes to desired levels, which would be costly (likely in the range of $100+ per residential property and $300+ per commercial or agricultural property) and time-consuming to make. Such appraisals could play a role in providing much-needed value evidence for high-value commercial properties such as shopping malls and manufacturing plants.

5.2 Alternatives to the Present System

Is there are better way? We begin by noting that there is no alternative to studying each property class in each of the State's 93 counties, although consolidation of the assessment function in smaller, adjacent counties would certainly help! Aside from the nine counties where PA&T performs the assessment function on behalf of the county, each county has a separate elected assessor who performs the assessment function under varying budget conditions using different CAMA systems, staff, assessment cycles, and procedures. Although most assessors are dedicated and highly professional and although PA&T guidelines, monitoring, and technical assistance efforts help with conformity, it is clear that each county and class of property must be studied individually as long as its assessment function is autonomous. Unfortunately, many counties are sparsely populated, which means that markets are thin and that it is difficult to fund a high-quality appraisal operation. . Combining county assessment districts as permitted by

section 77-1339 could alleviate some of the current problems with making defensible assessments and with making statistically valid ratio studies.

Market data (sales) from economically similar counties, school districts or school systems can be combined, since county lines constitute political and not necessarily economic boundaries. But it is well accepted that assessment levels cannot be extrapolated or imputed from economically dissimilar assessment jurisdictions or across disparate property classes. Thus, sample size and related issues have to be addressed head on.

Interestingly, the situation with respect to indirect equalization studies made for school aid purposes is more flexible. School districts in the same county share the same assessor, staff, budget, database, CAMA system, and assessment procedures. Although counties may physically review or individually appraise different portions of the county each year (while applying market adjustments as necessary in other areas) as set forth in their five-year plan, the assessments are the common product of a single system operating under a common plan with a common level of assessment in mind. Assessment procedures do not distinguish or change with school districts or local system boundaries. This means that school districts in the same county can, as a general matter, be pooled for analysis. True, a particular school district may be assessed at a comparatively low or high level, due to the nature of its properties, a breakdown in internal controls, or simply the luck of the draw. For the most part, however, such disparities will be benign or transitory, rather than due to fundamental differences in assessment practices and procedures. In fact, at least when samples are small, one can argue that observed differences in assessment levels among school districts and local systems in the same county may be due more to sampling error than reality.

PA&T's current practice of imputing assessment levels for school districts and local systems with few sales from countywide averages recognizes that school district boundaries have little to do with assessment practices or performance results and thus ratio results in such districts can, where necessary, be grouped for the sake of stability and the avoidance of unacceptable sampling errors. What the policy lacks, however, is formality, objectivity, and uniformity in application. We see three possible choices:

(1) Eliminate the indirect equalization study. Nebraska requires and enforces a comparatively tight level of assessment of 0.92 to 1.00. Compare this with the IAAO standard of 0.90 to 1.10 and related systems in other states that allow a window of ± 10% about the mandated target LOA. Given Nebraska's laudably tight standard, one could seriously ask whether it is productive or even necessary to attempt to determine precisely where in or about this window each of 3,726 property categories lie.

(2) Combine the studies. Estimates of the LOA are only worthwhile to the extent that they are reliable, that is, an estimated LOA with high sampling error is virtually useless on its face. As part of its direct equalization studies, PA&T could generate estimated LOAs for school district segments with sufficient sales to produce acceptable confidence intervals. Based on these findings, PA&T could highlight categories that confidence intervals indicate fall outside the required 0.92 to 1.00 range and, if appropriate, recommend to TERC that adjustments be made (presumably to an LOA to 0.96). If each class of property in

each county, as well as in each school district with adequate sales, were equalized to the common standard in this manner, there would be little point in further adjustments and the indirect equalization study could be discontinued.

(3) Narrow the indirect equalization study. In this scenario the indirect equalization study would be preserved, but (similar to scenario 2 above) county level LOAs would be used unless the confidence interval for the school district or local system failed to bracket the county LOA. To illustrate, assume an LOA of 0.94 for commercial property in a county and assume further that there are 15 school districts or local systems in the county. Assume that the number of usable commercial sales ranges from 1 to 25 and that confidence intervals are nonexistent or bracket 0.94, except for one school district with 15 sales, for which the calculated LOA is 1.10 with a confidence interval of 1.02 to 1.18. In this case, the calculated LOA of 1.10 would be used in place of the countywide figure of 0.94. Thus, countywide figures would be used unless there was reliable evidence that a particular school district or local system has a different LOA.

As a variation on this approach (scenario 3B), equalization could take place to the edge of the confidence interval closest to the countywide LOA (1.02 in the above example).[21] This would promote year-to-year stability and eliminate situations in which one school district received a sizable adjustment because the confidence interval was slightly above/below the countywide average while another district received no adjustment because its confidence interval just included the countywide average. In this scenario the first district would receive only a minor adjustment equal to the gap between the countywide average and the closest end of the confidence interval (e.g., if the countywide LOA were .97 and the confidence interval ranged from 0.99 to 1.13, the property category would be equalized at 0.99).

(4) Adopt rules and regulations providing for objective and uniform procedures for imputing assessment levels from countywide averages for school districts and local systems with few sales or when few sales occurred within a county. For example, rules might provide for imputing LOAs from countywide averages unless there were at least a minimum number of sales (say, 15 for illustration purposes) for a given class of property in a local school district or system. While this approach lacks the statistical sophistication of scenario (3) above, it might be perceived as more straightforward.

5.3 Sample Size and Representativeness

As discussed, the principal issue facing PA&T is small sample sizes, particularly in the school aid study. The several alternative scenarios discussed above are intended to address this major problem. Although the situation is not nearly as acute as in the indirect study, there are many instances in which samples in the direct equalization study are also too small for reasonable reliability, particularly in the case of agricultural and commercial properties. In fact, even one usable commercial sale in the course of a year is somewhat rare in the very smallest counties.

[21] We would recommend a 90% confidence interval for this purpose, meaning there would be only a 5% chance that the true LOA was lower than the lower confidence limit and only a 5% chance that the true LOA was above the upper confidence limit.

Fortunately, residential property, for which market data are reasonably abundant in most counties, accounts for some 70% of total equalized locally assessed value (a percentage which has grown slowly but steadily for at least the last decade).

As noted, the Department uses two years of sales in its studies for residential property and three years for agricultural and commercial property. Since all usable sales from this study period are selected for the study, there is little room for expanding sample sizes short of using still older sales or conducting appraisals, which we do not recommend except for selected high-value properties. The Department copes with this situation by relying on those sales that are available and its assessment procedure reviews to determine a most probable LOA. Naturally there is a bias toward stability, that is, to determine an LOA that is reasonably consistent with the prior year's value.

Although market data cannot be manufactured, we note that under IAAO Standards one can use up to five years of sales in a ratio study (provided they are adjusted for time as necessary), and we regard the use of older sales as the best alternative available to augment sample sizes in the smallest counties. Thus, for example, three years of sales might be used for residential properties and five years for commercial and agricultural properties in the smallest counties. Still, the use of sales beyond a three-year time frame makes time adjustments more problematic and still would not address all sample size problems. Thus, while we would not oppose using older sales on a selected basis as needed, we are comfortable with the current time frames.

A final issue regarding the time frame selected for the study is whether one year of sales is sufficient or even preferred in residential properties in the largest counties. Although one year of sales may be adequate in some counties at the *county* level, we recommend against adopting a one-year time frame in selected counties, as it would introduce consistency concerns and reduce the number of sales available at the substrata and school district levels.

5.4 Time Adjustments

Sales over a multi-year period must be adjusted to a common date as close to the target date of the analysis (normally the legal valuation date) as practical if the ratio study is to be accurate. The IAAO *Standard on Ratio Studies* (1999, page 18) states:

> "There should be a program of monitoring changes in price levels over time and adjusting sales prices for time as required. Such a program is an important component of a mass appraisal system as well as a ratio study. Time adjustments must be based on market analysis and supported with appropriate documentation."

Given that PA&T uses 2-3 years of sales in its ratio studies and given that property values change at varying rates dependent on property type and location across the state, it would seem imperative that sales be adjusted to a common date, namely the end of the study time frame (June 2003 in the case of the 2004 studies). Further, the case of *Hanna v. State Bd. of Equalization and Assessment* (1967) underscored the necessity of time adjustments when prior year sales were used in a ratio study: "There would not appear to be any sound reason for not, in like manner,

using sales occurring in the past few years where necessary to get a reasonable sales-assessment ratio, provided they also are adjusted to allow for any fluctuation in actual values in the interim." Although that case in now quite dated, the principles remain the same and are soundly supported in the sales ratio study literature.

In any case, PA&T does not currently undertake time adjustments in its ratio studies. We recommend that it begin to monitor price trends and adjust actual prices as necessary. It should be underscored that this does not mean that a separate study must be undertaken in each county. Instead, economically similar counties can be grouped for time analysis. This would appear to be particularly necessary and appropriate for commercial and agricultural properties. As one benchmark, in ratio studies done by one of the authors of this report in the State of Colorado, *commercial* properties in the state's 63 counties were grouped into 25 zones based on commonality of property types, economic activity, climate, and property characteristics. While each of the State's ten largest counties constituted a separate market area, combinations of between two and six counties each constituted the remaining areas. A separate time study was undertaken for each of these economic areas.

Section 6.5.4 of the IAAO *Standard on Ratio Studies* lists alternative methods for developing time adjustments. These methods are explained and illustrated in *Mass Appraisal of Real Property* (IAAO, 1999, pages 263-270). Among the various options, we recommend the sales ratio trend method, in which sale/assessment ratios are plotted against sale month (e.g., 1-24 in the case of a 24-month study period) and the rate of change in property values extracted. Because it requires only data on assessed values, sale prices, and sales dates, the method is applicable to all property types. It is also comparatively simple and lends itself well to both graphical and statistical analysis.[22] It should be underscored that when time-trend studies reveal no consistent pattern (or there is too little market activity to establish a trend) that no trend should be applied. That is, while time trends must be considered, one should not apply time adjustments where no significant trend is indicated. Also, counties should be encouraged to undertake their own studies and the PA&T may consider studies submitted by counties provided they comply with IAAO standards and methodology. In the case of agricultural land, PA&T may be able to use the time trends reported in *Nebraska Farm Real Estate Market Developments*.[23]

5.5 Measures of Central Tendency and Confidence Intervals

As discussed, PA&T conducts both direct and indirect equalization studies. In accordance with IAAO Standards, the median is used for direct equalization, while the weighted mean is the generally preferred measure for indirect equalization. Although we do not recommend any change in this policy, we note that alternatives (1) and (2) above for overhauling the school aid studies would effectively eliminate indirect equalization, so that only the median would be needed. Thus, in alternative (2) confidence intervals would be calculated around the median ratio. In alternative (3), in which indirect equalization studies would be refocused, confidence limits could continue to be calculated around the weighted mean ratio. We recommend, how-

[22] When counties are combined, ratios should first be "normalized" to a median ratio of 1.00 (by dividing the ratios by the median for the county) before analyzing them for time trend purposes.

[23] This excellent survey is reported in approximately June of each year and uses a survey conducted earlier in the calendar year (approximately February) for which data are reported.

ever, that if the school aid studies are continued, PA&T consider adopting the *square root weighted mean*, in which each ratio is weighted on the basis of the square root of its sale price. For example, a $5 million commercial sale would receive roughly 3.3 times the weight as a $500,000 sale, rather than 10 times the weight were the weighted mean used. This feature makes the square root weighted mean a somewhat more stable estimate of LOA than the weighted mean.[24]

The question arises: Should a calculated LOA be deemed acceptable if it fails to fall between 0.92 and 1.00 but the confidence interval overlaps the required window? For example, should an LOA of 0.88 be deemed acceptable for direct equalization purposes if its corresponding confidence interval ranges from 0.78 to 0.98, or from 0.84 to 0.92? We think not.

Section 77-1327(1) requires the Property Tax Administrator "to ensure the uniformity and proportionality of the assessments of real property valuation in the state" and Section 77-5023 (Supp. 2003) requires that residential and commercial properties be assessed between 92 and 100 percent of actual value and that agricultural land be assessed between 74 and 80 percent of actual value. We read these statutes as directing the counties and Property Tax Administrator to *ensure* that the 0.92 to 1.00 standard (or 0.74 to 0.80 in the case of agricultural land) is achieved, not to test whether there is statistically conclusive evidence that it has not been achieved. As a practical matter, given the large number of counties in Nebraska and frequently small sample sizes, confidence intervals will often be unacceptably wide, so that large departures from the mandated window (e.g., one county at 0.80 and another at 1.10) would have to be tolerated if equalization actions were eschewed because of confidence intervals. We see this as neither the letter nor intent of the law. Section 77-1327 in particular would appear to require proportionality in each major class of property in each county.[25]

However, when one drills down within a class of property in a particular county, so that explicit statutory mandates no longer govern and sample size and sampling error become even more problematic, we regard confidence intervals as appropriate. Thus, in our scenarios (2) and (3), we recommend that the overall county LOA be overturned for an individual school district or local system only if supported by confidence intervals. Similarly, if PA&T and/or TERC were to single out a given subclass or location within a county for possible equalization action, confidence intervals should support such action.

5.6 Outliers

As is well known, outliers (that is, extremely high and low ratios) can have a debilitating impact on a ratio study, depending on the measure of central tendency chosen. At one extreme, the median is impervious to outliers, which thus become of negligible concern for purposes of determining compliance with the 0.92 to 1.00 window in the direct equalization study. At the other

[24] See Robert J. Gloudemans, "An Empirical Evaluation of Central Tendency Measures", *Assessment Journal* (Jan/Feb 2000).

[25] By the same token, when samples are very small, an unacceptable COD or PRD may not be indicative of unacceptable performance. Both valuation and performance measurement become more difficult with limited market data.

extreme, outliers can highly influence the weighted mean (aggregate ratio), particularly if they occur for high-value properties.

PA&T and TERC recognize the effect outliers can have on ratio statistics. In the past TERC requested that PA&T exclude ratios that fell below 0.25 or above 2.00. For the 2003 studies, PA&T suggested instead that the lowest 2.5% and highest 2.5% of ratios in each county be excluded. This rule also proved problematic, as normal ratios could be excluded and sample sizes would be reduced unnecessarily. For 2004 TERC asked PA&T not to trim outliers, since all sales used in the ratio study have been qualified as valid.

IAAO Standards take the position that outliers should be reviewed. If the sale is found to be invalid, it should be removed from the study. If a data error has occurred, the error should be corrected. Currently PA&T does as much.
The IAAO Standard (page 20) then goes on to say that, once identified, outliers can be trimmed in order not to distort the outcome of the ratio study. Note, however, that trimming is permissive, not mandatory. Thus, current TERC policy complies with IAAO Standards, although a procedure for judiciously trimming the worst outliers would also be acceptable under the Standard.

Given the potential leverage outliers can have on the weighted mean, we recommend that the worst outliers be trimmed if the indirect equalization study is retained. The IAAO Standard includes a suggested procedure for trimming outliers, which unfortunately is heavily biased toward trimming high but not low ratios. Happily, this bias is easily rectified by first taking the logarithms of the ratios, which is what we would recommend. We would also recommend that, since the sales have already been screened, that only "extreme" outliers be removed. Technically, an "extreme" outlier is one that lies more than three inter-quartile ranges above the 75th percentile or below the 25th percentile.

5.7 Low-Value Properties

Very low-value properties can create problems in a ratio study. The market for such properties is enigmatic, making prices and sales ratios unpredictable and appraisals difficult. For example, an old dilapidated residence may sell somewhere between $5,000 and $15,000. If the property is assessed at $10,000, the ratio could be .50 or 1.50, even if the assessed value is directly in the middle of the likely range. It is not good to evaluate assessment performance based on such volatile sales prices. Further, low-value sales are accorded the same weight as regular and high-value sales in calculation of both the median and COD. In some cases, TERC has issued equalization orders that turned on the inclusion (or exclusion) of a single very low-value sale.

Because of these problems, we recommend that very low-value sales be excluded from the ratio study for at least direct equalization purposes. The weighted mean (and square-root weighted mean) is only nominally impacted by low-value properties. There are two possible approaches: (a) exclusion of assessments and/or sales prices below a certain dollar value or (b) exclusion of the lowest percentage of assessed values from consideration in the study. Because property values within a class of property can vary greatly among counties, the latter approach would be simpler and more practical. As one scenario, we recommend that PA&T exclude the lowest, say,

2.5% or 5% of the assessed value of each of the three major classes of property in each county from consideration in the ratio study. Assume, for example, that 5% were chosen as the cut point and that the total assessed value of commercial property in a county was $100 million last year and that there were 200 properties comprising the first $5 million of assessed value (with an average assessed value of $25,000 each). If one of these 200 properties were to sell, it would be automatically excluded and there would be no need to research the sale, which is likely to be problematic in any case (a rejection code could be automatically assigned to the property). Another scenario under approach (b) above would be to automatically exclude, say, the 5% of properties with the lowest assessed value in each class. Operationally, these approaches will require that counties provide PA&T with complete extract of their assessment rolls.

5.8 High-Value Properties

High-value properties have no undue impact in calculation of the median ratio, but can highly influence the weighted mean ratio. More importantly, such properties seldom sell, so that market values estimated in indirect equalization studies can be based on a number of low-value vacant land and smaller improved property sales while failing to consider the largest, most important properties. In some cases, a large manufacturing plant, shopping mall, or other property may constitute 25% or more (or potentially even more than half) of the total value of its class in an individual county.

Some states will tackle this problem directly by "isolating" high value properties that constitute, say, 5% or more of the value of their class. They are then appraised and factored into the study based on their indicated percentage of total estimated market value. Of course, such appraisals take time and resources. While we recommend that PA&T consider such appraisals for dominant properties if the indirect equalization study is retained, we are also cognizant of the resource requirement. An alternative is to identify and monitor such properties to ensure that assessors are keeping values current and contracting with qualified appraisers with expertise in such properties. Where these properties are not adequately appraised, PA&T could then recommend that TERC take up the matter with the counties.

5.9 Selective Adjustments of Sold Properties

Assessment oversight agencies must be vigilant in guarding against the unprofessional practice known as "sales chasing" in which values for sold properties are set near the sale price, while values for unsold properties are set at other, usually lesser amounts. The IAAO literature describes a number of techniques for detecting sales chasing (see particularly *Mass Appraisal or Real Property*, 1999, pages 309-316). Of these, the simplest and perhaps most effective is to track percentage changes in values for sold and unsold properties. In the past, PA&T staff did this on an informal basis by comparing assessed values for the current and previous year for sold properties. Atypical changes would signal possible selective appraisal of sold properties. However, what to do about such practices, even if detected, remains a problem.

Recently PA&T started making an alternative calculation in which the median ratio for the prior assessment year (e.g., 2003) is trended up by the overall change in assessed value in the class exclusive of growth. The trended median is compared with the calculated current year median.

A significant difference tends to indicate that sale properties have been appraised differently than unsold properties and consequently that the current year median is unreliable. The trended median could then be substituted. A problem, of course, is that the prior year median itself could be tainted by sales chasing.

A related alternative would be to use assessments at time of sale in the ratio study, with the assessments trended forward for the overall change of assessed value in the class exclusive of growth. The subtle difference is that the individual assessments (not the median ratio) would be trended forward. For agricultural and commercial property (where three years of sales are used), this means that a sale in the first year would be trended forward two years. A sale in the second year would be trended forward one year. We recommend that PA&T pursue this approach with a view to substituting it for the current-year median when sales chasing is detected. An inexplicable difference in percentage changes for sold and unsold properties or the failure of the trended median (as currently calculated) or of the median based on trended assessments (as described above) to fall within the required window should send up a red flag that the median based on trended assessments should be substituted.

In indirect equalization, the prior year's trended values could be substituted in a similar manner for calculating the weighted mean (or square-root weighted mean) if it is determined that a county has appraised sold properties differently than unsold properties.

5.10 Centrally Valued Properties

In addition to overseeing the assessment of locally assessed properties, PA&T assesses power generation and transmission facilities, railroads and airlines, and other property owned by regulated utility and interstate commerce carriers. Section 77-5022 requires TERC to equalize this property annually with locally assessed real property. PA&T facilitates this process by calculating the weighted average level of assessment (LOA) for locally assessed properties in Nebraska. This is accomplished by weighting the LOA established by TERC for each of the three property classes in each county by the percentage which each contributes to the total statewide abstract. For example, in 2003 the assessed value of residential property in Douglas County constituted 22.084% of the total statewide abstract value of properties assessed on a market value basis. Since TERC certified the assessment level for residential property in Douglas County at 0.940, residential property in Douglas County contributed 0.20759 to the calculation (0.22084 x 0.94 = 0.20759). The contribution of each property class in each county is computed in the same manner and summed to produce the statewide LOA. For 2003, the calculated statewide LOA was 96.23%. Pursuant to 77-5030, PA&T then uses this figure to calculate andcertify the equalized values of centrally valued properties to the counties for billing and collection purposes on or before August 10.

6. Conclusions and Recommendations

An overarching purpose of our recommendations is to ensure that ratio studies and level of assessment determinations conform to generally accepted mass appraisal methods, are made uniformly, and are statistically reliable.

1. Statutes should be modified to charge PA&T with the responsibility to determine if a class or subclass of property is not in substantial compliance with legal standards and should therefore be issued an equalization or reappraisal order; TERC should then hold hearings on and determine whether to issue such orders.

   Current statutes notwithstanding, determining whether one can conclude with reasonable confidence that a class or subclass of property is not in compliance with legal standards is not a cut and dried matter. Rather it is fraught with a host of technical complications discussed in this report. Thus, failure to achieve a median ratio of 0.92 to 1.00 for a small group of sales does not necessarily mean that the median ratio for all properties in the class or subclass is outside the required window. Equalization decisions should not be mechanical. Determining whether the statistical evidence and other supporting data are sufficient to conclude with reasonable certainty that legal standards have not been met requires both statistical knowledge and exercise of sound judgment based on all available evidence. The Department is in a more logical position to acquire and maintain the required expertise to make such determinations. As an appointed board, TERC is in better position to hear evidence and make a judicious determination regarding PA&T's determinations. Where it agrees with the Department, TERC should issue and ensure proper execution of its orders.

2. PA&T should develop and require counties to use standardized codes to indicate why a sale is rejected for purposes of the ratio study.

   The use of standardized codes for rejecting sales would create an audit trail that PA&T could monitor both by compiling statistics on the use of such codes by county and property type and by conducting audits on a random sample of sales.

3. Counties should be required to routinely provide PA&T with electronic, analyzable copies of local assessment rolls incorporating parcel identifiers, assessment values, and salient property characteristics.

   Such data would not only facilitate sharing of sales data among jurisdictions where there are few sales but would also allow PA&T to monitor sales chasing and the representativeness of sales samples. This recommendation will require collaboration among stakeholders and systems work for both PA&T and counties or their contractors.

4. A systems analysis should be undertaken to identify the data needs of PA&T, TERC, local assessors and the AAHLVB if relevant for comparable sales and other data that should be maintained in a central repository.

The information reporting requirements associated with the green sheets appear to be unnecessarily cumbersome for the purposes with which we are familiar. Although all the data currently required may in fact be necessary, a more effective and efficient system is easily imagined. Implementation of this recommendation should be coordinated with the one immediately above relating to electronic transmittal of standardized data.

5. PA&T should continue to maintain and enhance a statewide sales file of hard-to-assess properties.

   The market for such properties transcends county and other political boundaries. Such sales can provide helpful evidence and improve the reliability of appraisals. Assessors and the boards should not hesitate to accept comparable sales from economically similar properties.

6. The archival of data associated with the production of the annual reports and opinions should be enhanced.

   The PDF format for such reports should incorporate navigational aids, at least to the extent of marking each county as a separate chapter or "bookmark," if not also providing further navigation aids, indexing, and hyperlinks. In addition, the data should be preserved in a format that would permit further statistical analyses, which are not feasible with data preserved only in a presentation format, such as PDFs.

7. PA&T should obtain and interface a standard statistical package for purposes of sales ratio and other statistical analyses.

   The flexibility afforded by a statistical package would facilitate the development of time adjustments and other statistical analyses and greatly facilitate research into such areas as varying the trimming rules for outliers, testing representativeness, and exploring evidence of sales chasing.

8. PA&T should develop a standard structure for its assessment practice reviews.

   A standard format, including checklists, would make reporting easier, facilitate the ability to summarize results and track progress over time, and help ensure that all counties are treated equally.

9. The State should rethink its indirect equalization studies.

   There are simply too few sales to determine a separate reliable LOA for each class of property in each of 1,242 school districts and local systems. We recommend that the indirect equalization study either be reduced in scope or amalgamated with the direct study. The body of our report sets out specific alternatives for consideration.

10. PA&T should consider expanding the number of sales used in its studies to three years for residential properties and five years for agricultural and commercial properties in the smallest counties.

    Expanding the time period is the easiest and most effective way to increase sample size in a ratio study. The IAAO *Standard on Ratio Studies* (1999) condones using up to five years of sales in a ratio study and many assessment jurisdictions use three or more years of sales in appraisal models. At the same time we also regard the present time frames of two years for residential property and three years for agricultural and commercial properties as reasonable, so that our recommendation is that the older sales be used if (but only if) PA&T and TERC are comfortable in doing so.

11. PA&T should begin time-adjusting sales to June of the most recent sale year used in its studies.

    Time adjustments improve the accuracy and reliability of a ratio study and are strongly advocated by IAAO, as well as in the 1967 case of *Hanna v State Board of Equalization and Assessment*. They will also increase equity in study results between faster and slower growth counties. The sales ratio trend method would appear the simplest and most appropriate of the various time trend methods.

12. Counties should be grouped into economic areas for the purpose of time trend analysis.

    Particularly for agricultural and commercial properties, counties could be grouped into economic or market areas for time trend purposes. This would increase sample sizes, improve stability, and reduce the number of analyses that must be undertaken. Where a difference in time trends is suspected among counties in the same market, variables should be introduced to test for any such differences.

13. The median ratio should continue to be used for direct equalization, while primary preference is given to the weighted mean for indirect equalization.

    This is consistent with the current IAAO *Standard on Ratio Studies* (1999) and requires no change in existing policy and procedures. But see our recommendation for using a s*quare root weighted mean*.

14. Confidence intervals should not be used to determine whether a given class of property in a given county complies with the 0.92 to 1.00 (or 0.74 to 0.80) standard.

    Nebraska statutes direct the Property Tax Administrator to ensure compliance with required standards and to state an opinion as to whether properties in each class in each county are appraised within a range of 92% to 100% of market value (or 74% to 80% in the case of agricultural land). While these opinions could consider confidence intervals, as well as all other information available, confidence intervals should not be determining for this purpose. Rather confidence intervals are appropriate for determining whether subclasses of property are appraised outside of norms.

15. Extreme outliers should be excluded from the ratio study.

Outliers can have a major impact upon the weighted mean in indirect equalization studies. Although sales have already been screened, it is prudent to ensure that the calculations include no extreme ratios that might unduly distort the weighted mean, as well as the coefficient of dispersion and other measures of assessment uniformity. This is best accomplished by taking the logarithms of the ratios and trimming any that fall more than three inter-quartile ranges above the 75^{th} percentile or below the 25^{th} percentile.

16. Very-low value properties should be excluded from the study.

The market for such properties is volatile and individual prices unpredictable, resulting in a wide variation in ratios, even if assessed values reflect the middle of the range is which prices are most likely to occur. Further, these properties receive the same weight as other properties in calculation of the median and COD. Removing these sales from consideration, at least for direct equalization purposes, will enhance the credibility and stability of the study.

17. Special efforts should be made to appraise or monitor the appraisal of dominant, high-value properties.

These properties have a major influence upon market values estimated in indirect equalization studies. Preferably such properties would be identified and routinely appraised by PA&T staff or contractors with the necessary expertise. Alternatively, PA&T could monitor how counties appraise such properties to ensure that they receive adequate attention and expertise, and PA&T should inform TERC when they appear not to.

18. PA&T should pursue use of trended prior year values in its ratio studies.

LOA measures based on prior years' value trended forward for growth in the assessed value of existing properties are immune to "sale chasing" and thus can provide a representative indication of the true LOA when the current year's LOA does not because sold properties have been selectively adjusted or appraised. PA&T has several effective methods for helping to detect sales chasing. The addition of this method would complete the arsenal. When sales chasing is determined to exist, trended prior years' values should be substituted for current year values in order to produce a credible and unbiased indication of assessment performance.

19. The database should ensure the integrity of the historical assessment information.

This information is needed in conjunction with the immediately preceding recommendation. Pre-sale assessments should be entered into the database and thereafter not subject to unmonitored modification. Information on the growth in roll value, exclusive of new construction, should be available by property class for each county. This will make it

possible to construct ratios of pre-sale assessments, factored up by roll growth, to help monitor and to adjust for sales chasing.

20. PA&T's technical staff should be expanded.

Many of the enhancements and recommendations described in our report will require expanded analyses by PA&T. In particular, we recommend that PA&T conduct statistical analysis involving confidence intervals and the consideration of other relevant information to determine classes and specific subclasses for which it may recommend that TERC issue equalization or reappraisal orders. We have also recommended that PA&T develop market areas, develop time-adjustments, enhance tracking and adjustments for sales chasing, and undertake a number of other analyses requiring specialized expertise. We believe that two or three additional technical positions with the appropriate appraisal, statistical, and computer skills are needed to undertake the required analyses.

21. Efforts should be made to consolidate assessment districts.

The statutes currently permit counties to create joint or cooperative assessment districts. The formation of such districts stands to improve the cost-effectiveness of assessment operations and, in the process, increase sales sample sizes and the reliability of ratio studies. Efforts to create such districts are to be encouraged and PA&T should consider developing criteria for recommended minimum parcel sizes (and/or value thresholds) to support a modern, cost-effective assessing unit.

22. Efforts should be continued to consolidate school districts.

In addition to other benefits, consolidating school districts would increase the number of sales available in affected study areas and thus increase the reliability and stability of value estimates.

23. The Nebraska Association of Counties should continue its quadrennial salary study and recommendations.

This well done study and provides a helpful baseline to county boards in setting assessor salaries. We recommend that boards seriously consider the study guidelines and strive to attract and retain well-qualified assessors. Modest salary differences can translate into large dividends in the quality, efficiency, and supportability of the local property tax base.

Appendix 1 - Field Names and Descriptions from the DPAT Data Dictionary

Line #	Name	Description
1	Ag-Ag Total Acre Amt	Total Agricultural Acre Value captured from the Assessor's Worksheet
2	Ag-Ag Total Acres	Total number of acres entered from the Assessor's Worksheet
3	Ag-NonAg Total Acre Amt	Total Non-Agricultural Acre Value captured from the Assessor's Worksheet
4	Ag-NonAg Total Acres	Total Non-Agricultural Acres entered on the Assessor's Worksheet
5	Ag-Recapture Value	Total Recapture value captured from the Assessor's Worksheet
6	Assessor Adjmnt Amount	Assessor's Amount of Adjustment to the Adjusted Purchase Price from the 521 form
7	Assessor Comments	Assessor Comments entered from the Assessor Worksheet
8	Assessor Location	Field utilized by the Assessor to group, label or identify similar property sales
9	Assessor Qualification Code	Qualification Code (1-12) assigned by the Assessor
10	Assessor Usability Code	Usability Code (1,2 or 4) assigned by the Assessor
11	Assr Usability Code & Desc	Contains the full description associated with the Assessor's Usability Code entered on the worksheet
12	Buyer Address1	The Buyer's Name from the 521 form.
13	Buyer Address2	The Buyer's Name from the 521 form.
14	Buyer City	The Buyer's Name from the 521 form.
15	Buyer Name	The Buyer's Name from the 521 form.
16	Buyer Phone	The Buyer's Telephone Number from the 521 form.
17	Buyer State	The Buyer's Name from the 521 form.
18	Buyer zip	The Buyer's Name from the 521 form.
19	Com-Bldg Cost New	Commercial Building Cost New entered from the Assessor's Worksheet
20	Com-Condition Code	Commercial Condition Code entered from the Assessor's Worksheet
21	Com-Condition Code & Desc	Full Description Associated with Commercial Condition Code
22	Com-Const Class Code	Commercial Construction Class Code entered from the Assessor's Worksheet
23	Com-Const Class Code & Desc	Full Description Associated with Commercial Construction Class Code
24	Com-Construction Year	Commercial Construction Year, of Primary Building, entered from the Assessor's Worksheet
25	Com-Cost Rank Code	Commercial Cost Rank Code entered from the Assessor's Worksheet

26	Com-Cost Rank Code & Desc	Full Description Associated with Commercial Cost Rank Code
27	Com-Floor Area	Commercial Floor Area, of Primary Building, entered from the Assessor's Worksheet
28	Com-Improvements	The Number of Commercial Improvements entered from the Assessor's Worksheet
29	Com-Occupancy Code 1	The Primary (First) Commercial Occupancy Code entered from the Assessor's Worksheet
30	Com-Occupancy Code 2	The Second Commercial Occupancy Code entered from the Assessor's Worksheet
31	Com-Occupancy Code 3	The Third Commercial Occupancy Code entered from the Assessor's Worksheet
32	Current Year - Improvement	Current Year - Improvement Value
33	Current Year - Land	Current Year - Land Value
34	Current Year - PCC Citysize	Current Year - Property Classification Code Citysize Value
35	Current Year - PCC Location	Current Year - Property Classification Code Location Value
36	Current Year - PCC Parcel	Current Year - Property Classification Code Parcel Size Value
37	Current Year - PCC Proptype	Current Year - Property Classification Code Property Type (Present Use)
38	Current Year - PCC Status	Current Year - Property Classification Code Status
39	Current Year - PCC Zoning	Current Year - Property Classification Code Zoning Value
40	Current Year - Rolled Frwd	Identifies if the Current Year's Values were rolled forward from the previous year.
41	Current Year - Total	Current Year - Total Value
42	Current Year - Year	Current Year - Year
43	Date of Sale - Improvement	Date of Sale - Improvement Value
44	Date of Sale - Land	Date of Sale - Land Value
45	Date of Sale - PCC Citysize	Date of Sale - Property Classification Code Citysize Value
46	Date of Sale - PCC Location	Date of Sale - Property Classification Code Location Value
47	Date of Sale - PCC Parcel	Date of Sale - Property Classification Code Parcel Size Value
48	Date of Sale - PCC Proptype	Date of Sale - Property Classification Code Property Type (Present Use)
49	Date of Sale - PCC Status	Date of Sale - Property Classification Code Status
50	Date of Sale - PCC Zoning	Date of Sale - Property Classification Code Zoning Value
51	Date of Sale - Total	Date of Sale - Total Value
52	Date of Sale - Year	Date of Sale - Year
53	LCG-1A Acres	LCG 1A Acres from Assessor's Agricultural Worksheet
54	LCG-1A Amount	LCG 1A Amount from Assessor's Agricultural Worksheet
55	LCG-1A1 Acres	LCG 1A1 Acres from Assessor's Agricultural Worksheet
56	LCG-1A1 Amount	LCG 1A1 Amount from Assessor's Agricultural Worksheet
57	LCG-1D Acres	LCG 1D Acres from Assessor's Agricultural Worksheet
58	LCG-1D Amount	LCG 1D Amount from Assessor's Agricultural Worksheet

59	LCG-1D1 Acres	LCG 1D1 Acres from Assessor's Agricultural Worksheet
60	LCG-1D1 Amount	LCG 1D1 Amount from Assessor's Agricultural Worksheet
61	LCG-1G Acres	LCG 1G Acres from Assessor's Agricultural Worksheet
62	LCG-1G Amount	LCG 1G Amountfrom Assessor's Agricultural Worksheet
63	LCG-1G1 Acres	LCG 1G1 Acres from Assessor's Agricultural Worksheet
64	LCG-1G1 Amount	LCG 1G1 Amount from Assessor's Agricultural Worksheet
65	LCG-2A Acres	LCG 2A Acres from Assessor's Agricultural Worksheet
66	LCG-2A Amount	LCG 2A Amount from Assessor's Agricultural Worksheet
67	LCG-2A1 Acres	LCG 2A1 Acres from Assessor's Agricultural Worksheet
68	LCG-2A1 Amount	LCG 2A1 Amount from Assessor's Agricultural Worksheet
69	LCG-2D Acres	LCG 2D Acres from Assessor's Agricultural Worksheet
70	LCG-2D Amount	LCG 2D Amountfrom Assessor's Agricultural Worksheet
71	LCG-2D1 Acres	LCG 2D1 Acres from Assessor's Agricultural Worksheet
72	LCG-2D1 Amount	LCG 2D1 Amountfrom Assessor's Agricultural Worksheet
73	LCG-2G Acres	LCG 2G Acres from Assessor's Agricultural Worksheet
74	LCG-2G Amount	LCG 2G Amount from Assessor's Agricultural Worksheet
75	LCG-2G1 Acres	LCG 2G1 Acres from Assessor's Agricultural Worksheet
76	LCG-2G1 Amount	LCG 2G1 Amount from Assessor's Agricultural Worksheet
77	LCG-3A Acres	LCG 3A Acres from Assessor's Agricultural Worksheet
78	LCG-3A Amount	LCG 3A Amount from Assessor's Agricultural Worksheet
79	LCG-3A1 Acres	LCG 3A1 Acres from Assessor's Agricultural Worksheet
80	LCG-3A1 Amount	LCG 3A1 Amount from Assessor's Agricultural Worksheet
81	LCG-3D Acres	LCG 3D Acres from Assessor's Agricultural Worksheet
82	LCG-3D Amount	LCG 3D Amount from Assessor's Agricultural Worksheet
83	LCG-3D1 Acres	LCG 3D1 Acres from Assessor's Agricultural Worksheet
84	LCG-3D1 Amount	LCG 3D1 Amount from Assessor's Agricultural Worksheet
85	LCG-3G Acres	LCG 3G Acres from Assessor's Agricultural Worksheet
86	LCG-3G Amount	LCG 3G Amountfrom Assessor's Agricultural Worksheet
87	LCG-3G1 Acres	LCG 3G1 Acres from Assessor's Agricultural Worksheet
88	LCG-3G1 Amount	LCG 3G1 Amount from Assessor's Agricultural Worksheet
89	LCG-4A Acres	LCG 4A Acres from Assessor's Agricultural Worksheet
90	LCG-4A Amount	LCG 4A Amount from Assessor's Agricultural Worksheet
91	LCG-4A1 Acres	LCG 4A1 Acres from Assessor's Agricultural Worksheet
92	LCG-4A1 Amount	LCG 4A1 Amount from Assessor's Agricultural Worksheet
93	LCG-4D Acres	LCG 4D Acres from Assessor's Agricultural Worksheet
94	LCG-4D Amount	LCG 4D Amount from Assessor's Agricultural Worksheet
95	LCG-4D1 Acres	LCG 4D1 Acres from Assessor's Agricultural Worksheet
96	LCG-4D1 Amount	LCG 4D1 Amount from Assessor's Agricultural Worksheet
97	LCG-4G Acres	LCG 4G Acres from Assessor's Agricultural Worksheet
98	LCG-4G Amount	LCG 4G Amount from Assessor's Agricultural Worksheet
99	LCG-4G1 Acres	LCG 4G1 Acres from Assessor's Agricultural Worksheet

100	LCG-4G1 Amount	LCG 4G1 Amount from Assessor's Agricultural Worksheet
101	LCG-Accretion Acres	LCG Accretion Acres from Assessor's Agricultural Worksheet
102	LCG-Accretion Amount	LCG Accretion Amount from Assessor's Agricultural Worksheet
103	LCG-Dwellings Amount	LCG Dwellings Amount from Assessor's Agricultural Worksheet
104	LCG-Farm Site Acres	LCG Farm Site Acres from Assessor's Agricultural Worksheet
105	LCG-Farm Site Amount	LCG Farm Site Amount from Assessor's Agricultural Worksheet
106	LCG-Home Site Acres	LCG Home Site Acres from Assessor's Agricultural Worksheet
107	LCG-Home Site Amount	LCG Home Site Amount from Assessor's Agricultural Worksheet
108	LCG-Other Agland Acres	LCG Other Agland Acres from Assessor's Agricultural Worksheet
109	LCG-Other Agland Amount	LCG Other Agland Amount from Assessor's Agricultural Worksheet
110	LCG-Other NonAg Acres	LCG Other NonAg Acres from Assessor's Agricultural Worksheet
111	LCG-Other NonAg Amount	LCG Other NonAg Amount from Assessor's Agricultural Worksheet
112	LCG-OutBuildings Amount	LCG OutBuildings Amount from Assessor's Agricultural Worksheet
113	LCG-Recreation Acres	LCG Recreation Acres from Assessor's Agricultural Worksheet
114	LCG-Recreation Amount	LCG Recreation Amount from Assessor's Agricultural Worksheet
115	LCG-Roads Acres	LCG Roads Acres from Assessor's Agricultural Worksheet
116	LCG-Shbt/tbr Acres	LCG Shbt/tbr Acres from Assessor's Agricultural Worksheet
117	LCG-Shbt/tbr Amount	LCG Shbt/tbr Amount from Assessor's Agricultural Worksheet
118	LCG-Waste Acres	LCG Waste Acres from Assessor's Agricultural Worksheet
119	LCG-Waste Amount	LCG Waste Amount from Assessor's Agricultural Worksheet
120	Property Address 1	The first line of the Property address from the 521 form.
121	Property Address 2	The Second line of the Property Address from the 521 form.
122	Property City	The Property City from the 521 form.
123	Res-Bldg Cost New	Residential Building Cost New entered from the Assessor's Worksheet
124	Res-Condition Code	Residential Condition Code entered from the Assessor's Worksheet.
125	Res-Condition Code & Desc	Full Description associated with Residential Condition Code, entered from the Assessor's Worksheet.

126	Res-Construction Year	Residential Construction Year entered from the Assessor's Worksheet
127	Res-Floor Area	Residential Floor Area, of Primary Building, entered from the Assessor's Worksheet
128	Res-Improvements	The Number of Residential Improvements entered from the Assessor's Worksheet
129	Res-Quality Code	Residential Quality Code entered from the Assessor's Worksheet.
130	Res-Quality Desc	Full Description associated with Residential Quality Code, entered from the Assessor's Worksheet.
131	Res-Style Code	Residential Style Code entered from the Assessor's Worksheet.
132	Res-Style Code & Desc	Full Description associated with Residential Style Code, entered from the Assessor's Worksheet.
133	Reviewed Date	Date that the Reviewer performed the review of the Sale
134	Reviewer Adjamount	Adjamount
135	Reviewer Initials	Initials
136	Reviewer Notes1	Reviewer Notes
137	Reviewer Notes2	Reviewer Notes
138	Reviewer Notes3	Reviewer Notes
139	Reviewer Qualification Code	Qualification Code (1-12) assigned by the Reviewer
140	Reviewer Usability Code	Usability Code (1,2 or 4) assigned by the Reviewer
141	Reviewer Usability Desc	Contains the full description associated with the Reviewer's Usability Code entered on the worksheet
142	Sale 521 Acres	The Number of Acres entered on the 521 form.
143	Sale 521 Property Status	TheProperty Status entered on the 521 form.
144	Sale 521 Property Type	TheProperty Type entered on the 521 form.
145	Sale Block	Contains the Block Value of the Parcel Identification from the Assessor's Worksheet
146	Sale Book	Contains the Book Value, Entered from the 521 form.
147	Sale Comments	Contains any General Comments that have been entered pertaining to the Sale.
148	Sale County Name	Full County Name Based upon the County Code
149	Sale County Number	Contains the County Number, Entered from the 521 form.
150	Sale Deed Date	Contains the Deed Date, Entered from the 521 form.
151	Sale Entry Date	Contains the Date the 521 was entered into the Sale Application
152	Sale Geo	Contains the Geo Code Value of the Parcel Identification from the Assessor's Worksheet
153	Sale InActive	Identifies if the Sale Record has been Marked InActive
154	Sale Legal Description	Contains the Legal Description provided on the 521 form.
155	Sale Location ID	Contains the Location Identification captured from the Assessor's Worksheet.
156	Sale Market Area	Contains the Market Area Value of the Parcel Identification from the Assessor's Worksheet

157	Sale NonReal Amt	Contains the NonReal Property Amount identified in Question #23 from the 521 form.
158	Sale Page Number	Contains the Page Number, Entered from the 521 form.
159	Sale Parcel Number	Contains the Parcel Number of the Parcel Identification from the Assessor's Worksheet
160	Sale Posted Date	Contains the Date that the Assessor's Worksheet information was entered into the Sales File Application.
161	Sale Quarter	Contains the Quarter Value of the Parcel Identification from the Assessor's Worksheet
162	Sale Range	Contains the Range Value of the Parcel Identification from the Assessor's Worksheet
163	Sale Recorded Date	Contains the Date the 521 form was recorded with the Register of Deeds.
164	Sale Sale Amt	Contains the Value entered on the 521 form from line #24, the Adjusted Purchase Price paid for real estate.
165	Sale Sale Date	Contains the Sale Date, Entered from the 521 form.
166	Sale Sale Number	Contains the Sale Number captured from the Assessor's Worksheet.
167	Sale Section	Contains the Section Value of the Parcel Identification from the Assessor's Worksheet
168	Sale Stamp	Contains the Stamp amount entered on line #27 by the Register of Deeds on the 521 form.
169	Sale Subdivision	Contains the SubDivision Value of the Parcel Identification from the Assessor's Worksheet
170	Sale Total Amt	Contains the Value entered on the 521 form from line #22, the Total Purchase Price, including any liabilities assumed.
171	Sale Township	Contains the Township Value of the Parcel Identification from the Assessor's Worksheet
172	School Affiliate Code	School Affiliate Code
173	School Base Code	School Base Code
174	School Base Code - Stat Page	Contains the Base School Code to be used in the Statistical Analysis page.
175	School Unified Code	School Unified Code
176	Seller Address1	The Seller's Name from the 521 form.
177	Seller Address2	The Seller's Name from the 521 form.
178	Seller Name	The Seller's Name from the 521 form.
179	Seller Phone	The Seller's Telephone Number from the 521 form.
180	Seller State	The Seller's Name from the 521 form.
181	Seller Zip	The Seller's Name from the 521 form.
182	Seller city	The Seller's Name from the 521 form.
183	Usability	Usability