



Audit of the City Residential Real
Estate Assessment Process

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February 1, 2005

To the Honorable
The Common Council, City of Milwaukee
Council Members:

We are pleased to submit for your review and consideration this Audit of the Residential Real Estate Assessment Process in the Office of the City Assessor. The Audit sought to determine the extent of the City's compliance with State regulations and established professional standards regarding its residential assessments. The Audit also sought to determine the accuracy of the property specific databases used to perform the assessment, while also evaluating the Computer Assisted Mass Appraisal (CAMA) System used in this process. Finally, the audit sought to determine the uniformity of assessments throughout the city. The detailed Audit objectives are described in the Audit Scope and Objectives Section – page two of this Report.

The Audit focused on State and professional standards, policies and procedures used by the Assessor in residential property assessment process. The Audit also included an examination of the Assessor's property files and computer database. The Audit excluded the assessment of condominiums, apartments or mercantile properties.

The Audit determined that overall, the Assessor's residential property assessment process produces city-wide assessment accuracy levels at or above State requirements, complies with State and other professional standards and includes a computer assisted process which is generally well administered and controlled. Based on an assessment ratio analysis of 2003 sales compared to the January 2004 assessment, the 2004 city reassessment also met professional criteria in terms of assessment uniformity within the city of Milwaukee. However, a limited audit sample review shows that the lowest valued one-third of residential properties is on average assessed at slightly greater-than-market, while the middle and upper thirds are assessed at slightly less-than-market. This pattern should be examined further by the Assessor's Office, with the intent of maximizing assessment uniformity across all city residential properties.

The Computerized Mass Appraisal system (CAMA) forms the foundation for the City of Milwaukee assessment process. Therefore, the Assessor's Office documentation of that system is key to its continuing integrity and performance. While the audit concludes that the Assessor's Office documentation as needed by the City assessors is generally adequate, the data processing documentation of CAMA requires substantial expansion to promote continuous operations in the event of unexpected staff turnover.

Specific detailed findings and recommendations can be found in the Audit Question, Conclusion and Recommendation section of the audit beginning on page 4.

Appreciation is expressed for the co-operation extended to the auditors by the Office of the Assessor.

Sincerely,


W. Martin Morics,
Comptroller

Residential Property Assessment Process

Audit Scope and Objectives

This is an audit of the residential real estate assessment process as administered by the Office of the City Assessor. The audit included:

- Assessment-to-sales ratio analyses and other statistical measures to determine assessment accuracy and uniformity including a comparison to State and professional standards.
- A detailed review of the manual and computer processing procedures applied in establishing annual assessments for all taxable residential property
- Various audit tests to examine the accuracy of the residential sales, assessment and revaluation databases
- Audit tests to determine the accuracy of computer processing of residential revaluation based upon property specific, neighborhood and other factors.
- An evaluation of the administrative and computer controls over the assessments process
- Trend analysis of property owner assessment appeals over time.

In conducting this audit, extensive reference was made to existing State Statutes and regulations as well as available professional standards. The audit was not intended to measure the efficiency of assessor staff or related staffing needs. It was also deemed beyond this audit scope to evaluate the detailed assessment methods employed for any specific property or specialized type of property.

The objectives of this audit were to:

1. Determine the extent of the City's compliance with State regulations and established professional standards regarding its residential assessments
2. Establish whether the Assessor's Office parcel-specific residential property data base used in developing assessments is accurate
3. Evaluate the Assessor's Office computerized mass appraisal system (CAMA) in terms of its compliance with State requirements and professional standards and the adequacy of controls over CAMA including any manual adjustments.
4. Evaluate the uniformity of city residential assessments across different housing sales values and across different geographic areas of the city.

Background, Organization and Fiscal Impact

The allocation of municipal, county and school district taxes requires an assessment of value. These taxes are "ad valorem taxes" (meaning attached to the value). An ad valorem tax is based on the principle that the amount of tax paid should depend on the (market) value of property owned. The State of Wisconsin also bases its allocation of State Aids to counties, municipalities and schools through the equalized value of property. The State requires counties and municipalities to report the assessed value of property every year to achieve a fair and equitable allocation.

The State has defined four major classes of property for assessment: residential, commercial, agricultural and personal¹. The City's Assessor's Office further breaks down residential property into smaller components, residential (up to 3 family), apartments (four-family or greater) and condominiums. Also, commercial property consists of mercantile and manufacturing property. By Statute, the Assessor is responsible for the assessment of all property except manufacturing property, which is the responsibility of the State Department of Revenue. The City reported to the State in 2003 that there was over \$20 billion in locally assessed value of all classes of property.

The Assessor's Office is responsible for the assessment of property within the City of Milwaukee, other than manufacturing property. To perform this task the Assessor's Office consists of a staff of 56, with an adopted 2004 budget of \$4.1 million.

¹ Wisconsin Property Assessment Manual, Page 1-2.

Audit Questions, Conclusions and Recommendations

Audit Conclusions

Overall, the Assessor's residential property assessment process produces city-wide assessment accuracy levels at or above State requirements, complies with State and other professional standards and includes a computer assisted process which is generally well administered and controlled.

Based on an assessment ratio analysis of 2003 sales compared to the January 2004 assessment, the 2004 city reassessment also met professional criteria in terms of assessment uniformity within the city of Milwaukee. However, as shown in Chart A, the limited audit sample shows that the lowest valued one-third of residential properties is on average assessed at slightly greater-than-market, while the middle and upper thirds are assessed at slightly less-than-market. This pattern should be examined further by the Assessor's Office, with the intent of maximizing assessment uniformity across all City residential properties. One method to further enhance the uniformity in assessments throughout all areas of the City is to increase the level of on-site inspections, focusing on those neighborhoods with the lowest numbers of valid sales data.

The Computerized Mass Appraisal system (CAMA) forms the foundation for the City of Milwaukee assessment process. Therefore, the Assessor's Office documentation of that system is key to its continuing integrity and performance. While the audit concludes that the Assessor's Office documentation as needed by the City assessors is generally adequate, the data processing documentation of CAMA requires substantial expansion to promote continuous operations in the event of unexpected staff turnover.

1. Is the City of Milwaukee assessment of residential real estate in compliance with State regulations and established professional assessment standards?

The assessment process as performed by the Office of the Assessor in the City of Milwaukee complies with State regulations and professional standards.

The State of Wisconsin has established Statutes and Administrative Code regulations to promote accurate assessments. The goal is to assess property at 100 percent of its market value. These regulations and standards are designed principally for local assessment personnel-not for municipality-to-municipality comparisons. State required assessment reports focus mainly on the effect of the assessment process over the entire municipality rather than on an individual property or neighborhood.

The following paragraphs identify each of the major State requirements and professional standards followed by the extent of compliance achieved by the City of Milwaukee Assessor's Office.

State Statute Ch 70.05 requires that at least once every four years, each major class of property be assessed within 10 percent of market value as measured by valid sales. For 2003, the actual City-wide residential assessment ratio of 98 percent

assessed-to-market value is within two percent of market value (indicated by valid sales). In fact, the city assessments have met the acceptable assessment ratio standards in each of the past four years. See Table 1 below for the city-wide residential assessment ratio for the years 2000 through 2003 (Also, see Appendix 1 for all classes of property):

**Table 1
Wisconsin Equalization Report 2000 - 2003
Residential Property**

	2003	2002	2001	2000
Equalized Value (in \$ Billions)	13.2	12.2	11.3	10.2
Property Assessments (in \$ Billions)	12.9	12.0	10.4	10.3
Assessment Ratio* (Percent)	98.1	98.8	92.1	101.1

Source: Wisconsin Department of Revenue

- Values ranging from 90% to 110% achieved at least once in 4 years is acceptable

The State of Wisconsin uses statistical criteria to evaluate performance. These criteria include assessment/sales ratio analysis as a tool of measurement. Table 2 below shows three measures for years 2002 and 2003 along with how they relate to Wisconsin and IAAO standards. As can be seen from Table 2, City residential assessments met or exceeded these norms for 2003. For 2002, City residential assessment met two of the three criteria while falling at or near the desirable for the third criteria (Coefficient of Concentration).

**Table 2
State Measurement Criteria (Standards)**

Criteria	2003	2002	State Standard
C.O.D. (Coefficient of Dispersion)*	9.9	8.4	0-10 Excellent, 10-14 Good 15-20 Fair, 21-35 Poor, > 35 Unacceptable
P.R.D. (Price Related Differential)	99.1	101	98 to 103, Acceptable
C.C. (Coefficient of Concentration)	85.7	84.8	> or = 85, Desirable

Prepared by: Comptroller's Office

Source: Assessor's Office

*See Appendix 4, "Glossary of Terms" for definitions

Assessments are required to use a fixed date in time - January 1st of each year - for the estimate of the market value. (State Statutes Ch. 70.05, St. Admin. Code Ch.4.) This standard has been met over each of the last 20 years.

Revaluations must be made at least once every four years (Wisconsin Statutes Ch. 70). The Assessor's Office is revaluing properties annually. This exceeds the four year standard established by the State. Annual assessment increases assessment accuracy and promotes the fair distribution of State aids to Milwaukee.

Notices of change in valuation must be sent to taxpayers at least 15 days before the 3rd Monday in May. Appeals to reassessment must be on file with the Assessor by the third Monday in May (Wisconsin Statutes Ch. 70.47). The audit observed that **this standard has been met for 2003 and 2004.**

The Board of Assessors (BOA) must review all appeals by the 2nd Monday in October, at which time the entire Board of Assessor must assert the completeness of the assessment for that year. **The audit observed that this standard has been met for 2003 and 2004.**

The City must provide a report entitled “Statement of Assessment – Year XXXX” to the State providing the number of parcels, improvements, a valuation of land, a valuation of improvements and a total valuation. The Assessor issued the most recent report dated 2004. **This standard has been met.**

Professional standards have been established to provide a documented, consistent approach to establishing a market value-“Property Appraisal and Assessment Administration, authored in 1990 by the International Association of Assessing Officers (IAAO)”. The “Uniform Standards for Professional Appraisal Practice (USPAP)” authored by the Appraisal Foundation, funded by the Federal government to set forth requirements relating to both appraiser qualifications and appraisal standards. The USPAP consists of five major sections, Definitions, Preamble, Rules, Standards and Standards Rules. The last three sections are each divided into five parts namely: “**Ethics**”, “**Competency**”, “**Departure**” (deviation from established assessment standards), “**Supplemental Standards**” and “**Jurisdictional Exception**”

Aided by auditor observation of the City of Milwaukee assessment process, **the audit testing results below indicate that the City is in general compliance with assessment standards established and promulgated by the IAAO.**

1. The **Ethics rule** is divided into four parts: Conduct, Management, Confidentiality and Record Keeping. The audit found City Assessment Office compliance with all four aspects of the Ethics rule, including the published “Ethics Related Information for Assessment Professionals, compiled by the City of Milwaukee Assessor’s Office” dated September 2000.
2. For the **Competency rule**, the audit found that all appraisal staff are attending meetings and seminars for continuing professional education for the purpose of State Recertification. The State requires 30 hours of training every 5 years for re-certification. The audit reviewed appraisers’ education logs and attendance at staff meetings to conclude that all City assessors comply with this rule.
3. The audit found no material **Departure** from standard valuation practice in its sample of transactions tested. The audit included a review of property records and staff memos regarding procedures. Overall, during the course of the audit, nothing came to the auditors’ attention by test,

audit observation or interview that would indicate a significant departure from documented City of Milwaukee assessment practice requirements.

4. The audit found no material **Supplemental Standards** warranting further audit.
5. "**Jurisdictional Exceptions**" apply to appraisal work that is contrary to law or public policy in that state. The audit found no such exceptions.

2. Is the Assessor's parcel-specific property data base used in developing assessments accurate?

As demonstrated above, overall the current City Assessor assessments data base is sufficiently accurate to meet and exceed State requirements. These requirements focus mainly on the Aggregate Sales (citywide assessment-to-sales) Ratio. See Appendix 4 - Glossary of Terms and Tables 1 and 2 above.

To test the accuracy of property record data, a sample of 158 properties was tested. The audit also reviewed all sales recorded in 2003 to determine if an on-site inspection by a City assessor had been conducted to verify and as necessary update the property record.

Audit conclusions are as follows:

1. Minor errors in the database (i.e. incorrect inspection dates and age of homes were not always accurate) were found.
2. A large portion of City property records sampled show no record of physical inspection. Based on an audit sample, 31 percent of properties examined included no indication of an on-site inspection.

The Assessor's Office update and correction of property characteristics data on the property database is accomplished mainly through on-site inspection. Therefore, the extent of on-site assessor inspections is critical to maintaining an accurate property database. Inspections are normally initiated as a result of property owner actions (sale, home improvement, etc.). However, only a limited number of these property owner actions actually result in an on-site inspection. The Assessor's Office establishes inspection priorities as follows from highest inspection priority to lowest priority: 1) assessment appeals, 2) sales, permits and new construction, and 3) houses that appear to have changed characteristics (example: an assessor observes a dumpster on the property site but no permits had been filed for that parcel). However, the priorities can shift depending on the assessment cycle and statutory deadlines. One factor hampering the assessors' efforts to inspect is that the homeowner is not required to allow the assessor access to the property for inspection purposes.

Table 3 below summarizes the level of assessor on-site inspections for 2003.

Table 3
Residential Inspections in 2003

Description	Total	2003 Inspections	Percent Inspected
Appeals Filed	1,689	1,256	74.1
Permits Filed	4,431	1,909	43.1
Sales	4,343	1,577	36.3
City Parcels	135,100	4,742	3.5

Prepared by: Comptroller's Office
Source: Assessor's Office

In 2003 there were 1,689 residential appeals filed. For the related residential parcels, 1,256 (74.1%) were inspected in 2003. Nearly 90 percent (1,497) of the "appeal" parcels had undergone interior inspections over the past five years. About 43 percent (1,909) of the 4,431 residential building permits filed in 2003 triggered an interior inspection in 2003. In 2003 there were 4,343 residential sales (excluding invalid sales) in the City of Milwaukee, of which 1,577 or 36 percent resulted in an inspection in 2003. **Property records for about 31 percent of the 2003 sales parcels indicate no inspection of the property at any time in the past.**

The city of Milwaukee encompasses approximately 135,100 residential parcels. The City Assessor's Office had conducted a complete exterior-interior inspection for 4,742 (3.5 %) of the parcels in 2003. At this rate of inspection, 28 years would be required to inspect every City residential parcel.

Recommendation #1: The audit recommends that the Assessor's Office develop an assessor Residential Inspection Plan and schedule that would increase the number of on-site property inspections each year. **A reasonable initial goal would be to inspect at least five percent of City residential parcels annually.**

Focus of the Residential Inspection Plan should emphasize increased inspections in the following areas:

- More expensive residential properties of the city having no record of a prior inspection and no recent valid sales information.
- Neighborhoods having a limited number of valid sales on which to base residential assessments.

These inspections will help identify, update and otherwise correct property characteristics data, leading to more accurate assessments for the properties selected and for the city as a whole. (Note: See data and analysis under question #4 below on sales-to-assessment ratios for three property value groupings and for three sub-areas of the city.)

3. A. Does the Assessor's Computer Assisted Mass Appraisal (CAMA) System comply with established State requirements and professional standards for the determination of assessed value?

B. Does the assessment process include adequate controls over manual changes to CAMA computer produced assessments?

C. Does CAMA incorporate adequate controls to produce accurate assessments?

Introduction

The CAMA system is the main tool used by the Office of the Assessor to assist in accomplishing its annual residential assessment/revaluation. CAMA is a tool developed by the Assessor's Office and has been used in one form or another since 1978. Development of the current CAMA system began in 1998 with initial implementation in 2000. CAMA produces an initial valuation of each taxable residential property within the City as of a single date (i.e. the January 1 valuation) based on the physical characteristics of the parcel as recorded on the Assessor's Office property database, comparable sales data and other characteristics such as the neighborhood location, style, etc. The City has updated and refined the system repeatedly since its original implementation.

CAMA consists of a series of computer programs, property data files and procedures which together generate an initial assessed property value for each property. However, CAMA is but one part of the total residential assessment process. There are 38 different physical and locational characteristics (or variables) used in the CAMA valuation. The variables in the CAMA model which have the greatest impact on the computer produced initial assessment value include (in alphabetical order):

- Bathrooms, number, location (floor, basement, etc.) and size (number of fixtures),
- Bedrooms, number,
- CDU (condition, desirability, usefulness) a numerical rating of observed physical condition and degree of desirability and usefulness of the structure,
- Condition (20 grades from poor to excellent),
- Construction materials type,
- Location (neighborhood factor)
- Lot size,
- Square footage,
- Style (17 styles from mansion to cottage).

The adjustments for the above variables are measured in the market place and applied consistently through the CAMA model. For example: the average sale price of a colonial house is compared to the average sales price of all other styles and expressed as a factor to use in valuing all colonial houses in the city.

Due to the State-mandated "as of" January first assessment date, all valid sales are time weighted, using a weighted three year moving average sales price in the calculations. In

effect, the sales price is adjusted to an estimated value as of the date of the January 1st assessment.

The City's CAMA was custom developed by the City using the application development tool called "Powerbuilder" and is written in a proprietary computer language known as "Powerscript". This system is used to calculate the assessed value and estimated market value for each of the 135,096 taxable properties in the City. Appendix 3 is an overview flowchart of how the CAMA computer system fits into the overall property assessment process.

A. Does CAMA comply with established State requirements and professional standards for the determination of assessed value?

The audit concluded that the CAMA process as used by the Assessor's Office complies with appropriate State¹ and professional (International Association of Assessing Officers) assessor standards for determining assessed value. Such standards include:

1. **Sales Comparison Approach** to valuation – in deriving a market value assessment for a property, a comparison of that property to the sale prices of similar properties recently sold. City of Milwaukee assessments are determined based on actual sales data, applying these sales data together with the physical and locational factors in the CAMA model for each property to produce the desired property assessments.
2. **Use of Standard Variables** - CAMA records 38 property characteristics for each residential property. The CAMA property value is adjusted depending on standard additions or deductions for the specific characteristics of the property (Example: \$6,400 added for an additional bathroom). These standard variables are stored and maintained as tables within the CAMA system.
3. **Comparative (average) Unit Values** – Used within the CAMA model in deriving a property assessment, these unit values are average per-square-foot costs or other unit costs of a property having certain construction and size characteristics.
4. **Documented Adjustment Process** – Documentation defines under what conditions CAMA produced property values can be manually adjusted by City assessors based on unique market conditions and special circumstances (Also see the section on controls over manual changes to CAMA computer-produced assessments below.).
5. **Ratio Studies** - The City Assessor's Office uses an array of assessment to sales analyses to help calibrate the CAMA system.

Audit tests also included a detailed examination of the table data, formulas and methodologies included in CAMA. First, the audit concluded that the table data used by the assessors was derived applying the above standards. Second, formulas and table data were further tested with a sample of 10 properties, comparing those property assessments produced by the CAMA system with assessments manually calculated for the ten sampled properties. In each of the 10 tested properties, **the CAMA computer-produced**

¹ Wisconsin Property Assessment Manual, Part Two, Chapter 20

assessed value matched the auditor produced manually calculated value with only minimal differences due to rounding.

B. Does the assessment process include adequate controls over manual changes to CAMA computer produced assessments?

The Audit concludes that the controls over manual changes to the CAMA computer-produced assessments are adequate.

Even though the CAMA computer software is used to calculate initial property assessment valuations, the judgment of professional assessors is required to make the final valuation for each property. If the assessors are aware of specific unique circumstances affecting a property, (Example: a 24 hour drugstore on an adjoining property), the assessor can modify the CAMA computer system-generated values to reflect this situation.

The CAMA system is designed to record a variety of property characteristics using pre-defined values which are an important factor in the consistency of processing. As mentioned, not all parcel assessments lend themselves to such pre-defined classifications, requiring adjustment to the CAMA-produced assessed value. The Assessor's system can handle this via an override capability.

1. The use of the override is subject to standard procedures which limit the situations in which the override can be used and require supervisory review of assessment override values. The assessor must record his rationale for the override in the notes section of the property record. When a value is overridden, the system sets a flag that identifies the record as overridden. The assessor's supervisor must approve the override before it can be updated on the system.
2. Unusually large differences between the assessed value and the sales price may occur to a limited degree. These 'outliers' are defined by the Assessor's Office as those sales which vary from the CAMA produced assessment by more than 15 percent. These outliers are then flagged and excluded for CAMA calibration and revaluation purposes to avoid distortion of neighborhood and city-wide property assessments.
3. Invalid sales are also flagged, noted and excluded from the annual CAMA calibration. Reasons for exclusion include: non-arms length sale (example: sale between family members), foreclosure, partial sale, mixed sale of real property and personal property and sale with 'special terms' (example: portion of the sale price being returned to buyer).
4. Assessor's Office procedures require that all exceptions including outliers and invalid sales be reviewed and approved in writing by the supervising assessor. The property record must document such approval.

C. Are current computer and administrative controls over CAMA adequate?

Currently, the CAMA system includes substantial documentation on how assessors are to use and interact with CAMA. Also, important control procedures covering data input, processing and output exist. However, CAMA data processing technical documentation is yet to be completed. **Until this technical CAMA documentation has been completed, the Audit cannot conclude as to the adequacy of existing CAMA data processing controls.**

Rather than purchase commercial software, the City's CAMA system was developed "in-house" by City staff. Upon initial implementation in 2000, the CAMA system was poorly documented. Since this implementation, the Assessor's Office has made substantial progress in expanding the initial CAMA documentation, especially regarding the user (assessor) working documentation. However, the data processing aspect has yet to be completed. The Assessor's Office is now in the process of updating and expanding existing data processing documentation including required data processing support, maintenance and CAMA enhancement procedures.

Substantial CAMA user documentation was provided for audit examination including the RVS (Residential Valuation System) Manual, the Grading Manual for Residential Properties, Memoranda describing the assessment/inspection process residing on the Assessor's intranet and a variety of computer spreadsheets used by assessors to verify CAMA computer-produced results. This documentation provides a firm foundation for adequate user (assessor) documentation.

The audit also found various technical data processing input, process, and output controls over the use of the CAMA system. These include:

- Password protection for key CAMA functions,
- Prohibiting access to CAMA from outside the Assessor's Office,
- Limiting CAMA access and program change authority to CAMA technical support staff excluding the assessor staff,
- Calibration reports for each assessment neighborhood used to identify valid sales. Such valid sales become proper inputs to the CAMA calibration process. Calibration reports include both general measures of mean and median value ratios (see "Glossary") as well as individual sales data.
- Stratification of residential parcels by style and type (single family, duplex, etc) to confirm accurate computer model calibration,
- Drop-down computer screen menus with lists of permitted values for various characteristics. This prevents invalid data entries,
- Adjustment boxes required to modify a computer produced value, with a text box for entering the explanation behind the adjustment. This promotes adequate documentation of all manually introduced changes to the computer valuations,
- Office procedures requiring a standard format for dates, assessor initials on adjustments with supervisor review and approval. These procedures minimize data entry error and promote the required supervisor approval.

- Control edit reports to check the accuracy of Assessor's Office property database, with comparisons to both the Department of City Development REMAST system and the City Treasurer property database.

The above processing controls are an important strength. However, the audit found gaps in documentation, particularly in the data processing technical documentation supporting CAMA controls. Also, certain administrative procedures documentation was not current. Finally, routine database and CAMA model maintenance - upgrade and enhancement procedures were not documented.

Data processing cycle procedures are generally not available. For example, this could include documentation describing when database edit reports are run, by whom and how the reports are verified and used to update the affected database(s). One way to document these procedures is to define each data processing cycle, then thoroughly describe the sequence of work tasks involved in each cycle. The data processing cycles for CAMA could be classified as follows:

1. Sales processing and database update,
2. Adjustment processing and data base update,
3. CAMA calibration process,
4. Revaluation and data base update, and
5. CAMA system enhancement-maintenance-update.

Other classifications are possible. The important point is to expand the data processing cycle documentation to describe the process in sufficient detail to use as a training vehicle for new personnel. Documentation for each cycle should describe the process in detail including the sequence of required procedures, who in the technical staff performs each procedure, when the procedure must be completed, what computer program(s) are affected, etc.

As mentioned earlier, the audit included a manual calculation of a random sample of 10 properties. During the test were several minor typographical errors were noted. Example: inspection recorded in the year "2993". The audit did not find any significant typographical errors requiring further testing and review.

Recommendation #2: The Assessor's Office should complete the data processing technical documentation of the CAMA system. Such documentation should provide a complete description of data processing cycles, including how the CAMA system is regularly calibrated, maintained and updated. Each of the major CAMA data processing cycles should be thoroughly documented. (See comments above.) Such documentation will help prevent future problems with the system in the event that CAMA data processing support staff should change.

Recommendation #3: The Assessor's Office should establish a cyclical review of all property records to confirm their accuracy. Such a review would require that, for example, 20 percent of the property database be examined each year, achieving a complete property database examination over a five year period. Focus should be placed on those property records with no recent sale activity, permits or inspection. The goal is

to correct any inadvertent errors and address those problems resulting from incorrect recording of property characteristics in the property database.

4. How *uniform* are assessments within the City of Milwaukee?

Introduction

The main focus of Chapter 70 of the State of Wisconsin Statutes, the Wisconsin Property Assessment Manual, IAAO and USPAP is at the local level. The Wisconsin Assessment Manual discusses and illustrates accepted assessment methods, techniques and practices with a view to more nearly uniform and consistent assessments of property at the local level. One measure of assessment uniformity is the ratio of assessment-to-sales value, or “assessment ratio”.

A major objective of assessment ratio studies is to determine the degree of “assessment uniformity.”² “The State also uses the results of ratio studies reveal uniformly assessed values among *and within* municipalities.(bolding inserted)”³ The State Department of Revenue also encourages local assessors to monitor assessment ratios within their own respective jurisdictions:

“The use of assessment/sales ratio studies can be beneficial to the municipalities in a number of ways. The studies can be used as a general appraisal tool to indicate the need for a particular neighborhood, specific class of property of the whole municipality to be reassessed.”⁴

Two limited ratio studies were conducted as part of the audit to help measure the degree of residential assessment uniformity within the city of Milwaukee. First, the audit analyzed all 2003 residential sales, sorting then grouping these sales into three equal groups by sales value. **The audit found the following assessment-to-sales percentages:**

- **Properties sold at below \$94,500 – 101.9%**
- **Properties sold from \$94,501 to \$129,000 – 98.9%**
- **Properties sold at over \$129,000 – 96.5%.**

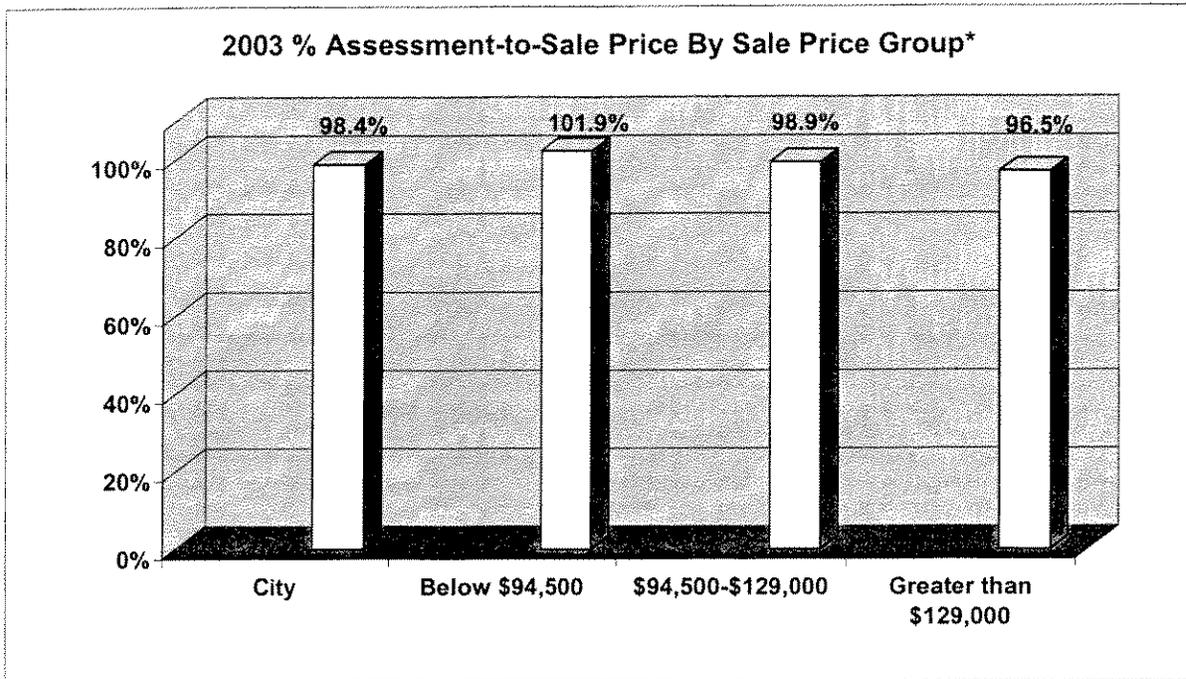
The IAAO indicates that the assessment ratio for each stratum or subgroup of property should be within five percent of the jurisdiction’s aggregate ratio. For all 2003 city of Milwaukee residential sales, the aggregate (city-wide) assessment-to-sales ratio was 98.4 percent. Based on the 98.4 percent city-wide assessment-to-sales ratio, **each of the above three sub-groups of the 2003 residential sales meets the IAAO criteria for uniformity.** See Chart A below:

² *ibid.*

³ Wisconsin Assessment Manual, Chapter 14-9

⁴ *ibid.*

Chart A



*Consists of all valid 2003 sales. Sales sorted from lowest to highest value, then divided into three equal groups (<\$94,500, \$94,500-\$129,000, >\$129,000).

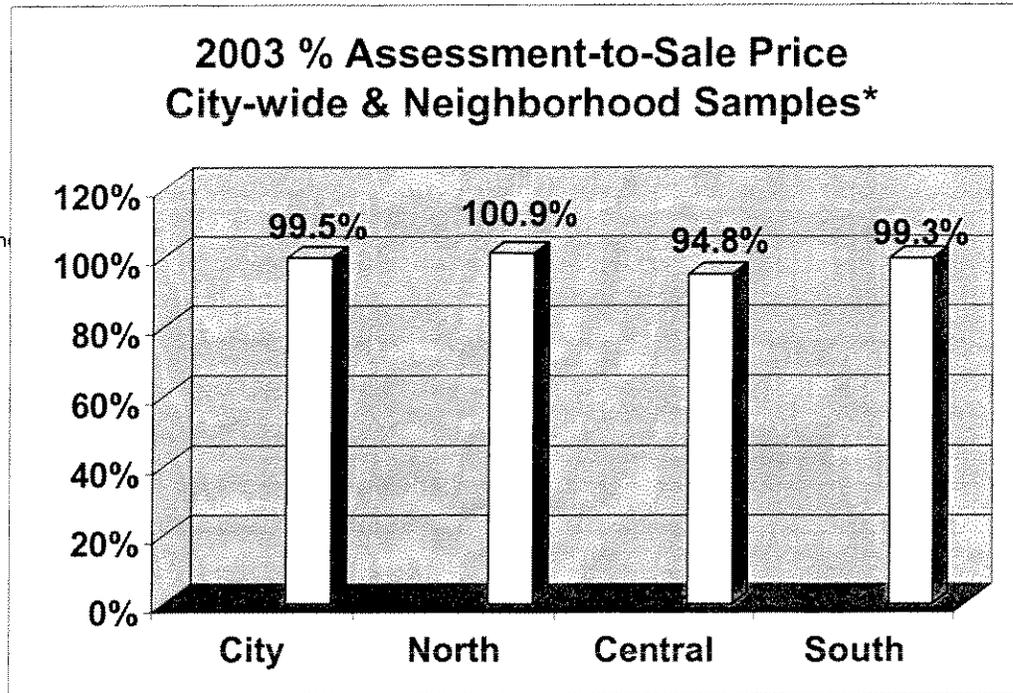
Comptroller 2-01-05

The audit also sampled 2003 residential sales within a neighborhood cluster in each of three distinct areas of the city – North, Central and South. Eighteen specific neighborhoods were selected by City Assessor staff as being representative of the area. (See Appendix 2) This residential sales sample shows the following assessment-to-sales ratios:

- 94.8% Central city
- 99.3% South side
- 100.9% North side
- 99.5% Total sample

As mentioned above, the aggregate ratio for all 2003 city of Milwaukee sales was 98.4 percent. Therefore, **this sub-grouping sample of 2003 residential sales also meets the IAAO criteria for uniformity.** See Chart B. The Central City sample contained substantially fewer valid sales and inspections than the other two sections of the city. As a result, the Central City assessment-to-sales ratio percentage of 94.8 percent from the audit sample is less reliable than those of the north or south side. See Chart B below:

Chart B



*Sample = all valid sales in 18 sampled neighborhoods, 6 in each City area.

Comptroller 11-18-04

For both audit samples, the above assessment-to-sales percentages fall within the required State assessment ratio range of 90%-110% for residential property and the IAAO uniformity criteria of a +/- 5% of the aggregate city-wide assessment ratio (=98.4%).

According to the State of Wisconsin Assessment Manual, if it is

“...noticeable that lower priced property tends to be under-assessed and higher priced property tends to be over-assessed, this gives the assessor an indication that there are inequities in the assessment.”⁵

The results of the audit assessment ratio analysis for all 2003 residential sales within the city of Milwaukee indicate that properties with lower sales values tend to be assessed at values slightly above their market value. In contrast, this same analysis shows that properties with higher sales values tend to be assessed at slightly lower than their market value.

The above audit tests were made using valid 2003 sales and the January, 2004 assessment results.

Recommendation #4: The audit recommends that Assessor’s on-site inspection staff place greater focus on those neighborhoods having fewer valid sales data. Additional

⁵ Wisconsin Assessment Manual, Chapter 14-12

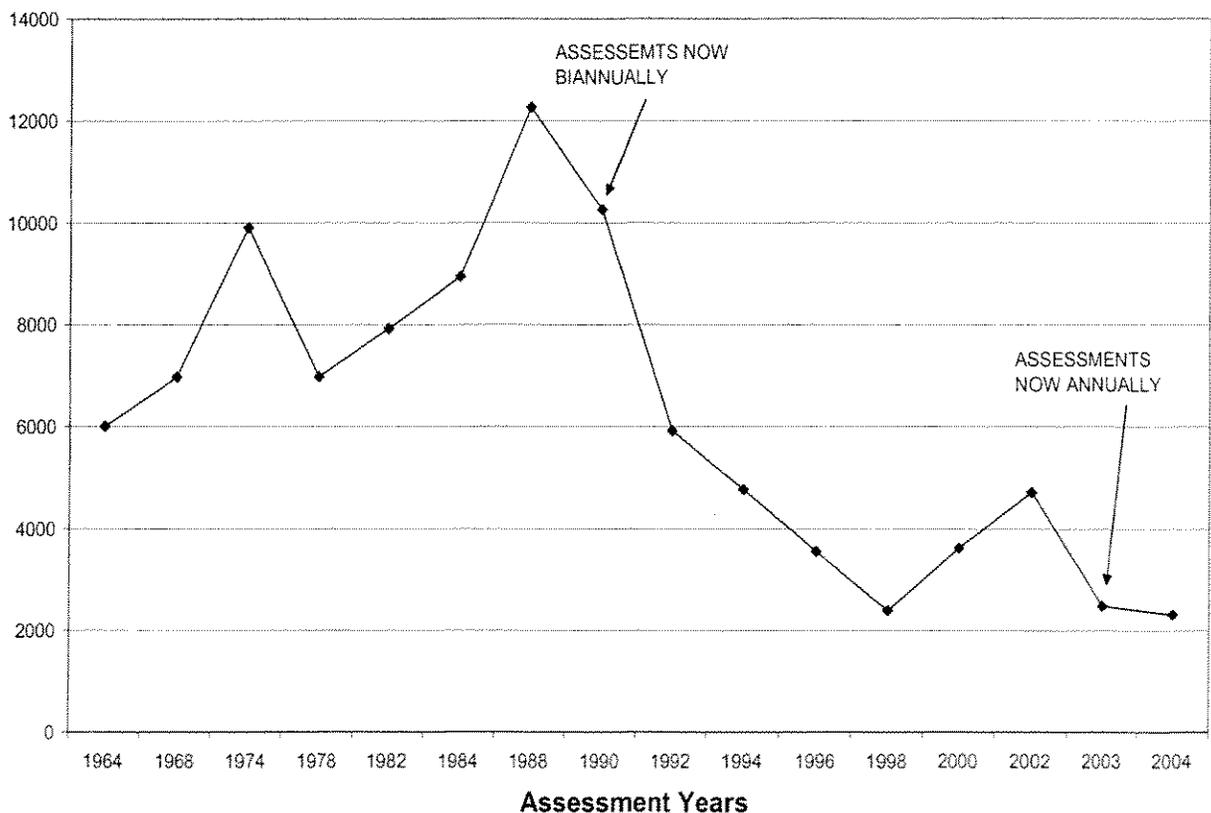
inspections in these neighborhoods are likely to yield the most significant improvement in assessment accuracy and overall fairness and uniformity of the assessment system.

Trends in Assessment Objections filed

Another measure of the accuracy, fairness and uniformity of City assessments is the number of objections filed by residential property owners. See Chart C. From 1964 through 1990, the number of annual objections filed doubled from about 6,000 to over 12,000. In 1990, the Assessor reduced the assessment interval from once every four years to once every two years. From 1990 to the year 1998, objections filed were reduced from 12,000 to just over 2,000 annually. With about 4,600 objections filed in 2002, the Assessor further reduced the assessment interval from once every two years to annual reassessments. While homeowners often do not look on reassessment favorably, the more frequent the reassessment, the more accurate the assessment and the more equitable the distribution of the property tax burden. For the 2004 assessment, 2,318 objections have been filed. **The number of assessment objections filed during 2004 is the lowest level of objections over the past 40 years.** See Chart C below:

Chart C

Assessment Appeals





Mary P. Reavey
Assessment Commissioner

Peter C. Weissenfluh
Chief Assessor

ASSESSOR'S OFFICE

February 2, 2005

Mr. Wally Morics, Comptroller
City of Milwaukee
City Hall
Milwaukee, WI 53202

Dear Mr. Morics,

We appreciate the efforts made by your department to study our residential assessment procedures. The assessment process can be complicated and is not easily understood. Beginning in June of 2004 we have engaged in numerous meetings and provided extensive data and documentation. We appreciate that you recognize that this office has fully complied with your information requests. We are proud of our staff; proud of the product we produce and truly believe the results do create a uniform and equitable basis for distribution of the various taxing body levies. That fair distribution along with consistent application of state statutes is our ultimate goal. Although the "appraisal" profession is considered an art rather than a science professional standards do exist. We consistently meet, or in fact, exceed those standards.

While we are generally pleased with the results of the audit, the Assessor's Office would like to comment in an effort to help your readers more fully understand the assessment process. We particularly want to address your conclusion that the "lowest one-third of properties is on average assessed slightly greater-than-market while the middle and upper thirds are assessed at slightly less than market". We believe that statement while expressed as "slightly" is actually not accurate. Our explanation and further comments are presented in the attached report.

We would be happy to address any questions that you might have.

Sincerely

Mary Reavey
Assessor's Office

the Coefficient of Dispersion (COD). The other standards laid out in Table 2 are not state standards. The second standard, Price Related Differential (PRD), a measure of progressivity/regressivity, is not a state standard, but an IAAO Standard. Regardless, the City of Milwaukee's residential assessment performance falls within the category that would characterize our performance as neither regressive nor progressive. This means low and high value properties are equally assessed. The final measure in Table 2, Coefficient of Concentration, is neither a state standard nor IAAO standard. Nevertheless, the City of Milwaukee's performance would be considered desirable especially considering the diverse nature of the properties that we assess.

Although there are no recommendations as a result of this objective we do find some statements in the report puzzling. At one point the report characterizes that we are in general compliance while the "Audit Conclusions" indicate complete compliance. At times, we feel by comments made in the audit, the Comptroller's Office serves to hold us to a higher standard than is expected within our profession. We would argue that our performance is excellent and is in full compliance with all state regulations and professional standards.

Objective 2: Establish whether the Assessor's Office parcel-specific residential property data-base used in developing assessments is accurate.

This part of the audit focused on a sample of 158 properties and an analysis of property inspections based on fielded appeals, permits and sales. The audit found minor errors in the data base and that some properties had not been inspected.

Since the audit demonstrates that the current assessment database is sufficiently accurate to meet and exceed state requirements, one could ask, "do the minor inaccuracies noted warrant a shift in priority of workload assignments?" We feel that error-checks internal to our systems catch the errors in variables that drive value.

The inspection data laid out in Table 3 is incomplete. First, it only shows inspections for three types of activities – appeals, permits, and sales. In actuality, we also inspect property for other reasons, including combinations, divisions, status changes, request for review, unfinished prior years' assessments, verification of unit counts for solid waste fees, exemption reviews, special projects, etc. The total residential inspections in 2003 actually amounted to 11,616. Secondly, Table 3 is misleading because it compares work that was initiated in 2003 to actual inspections of that work in 2003. Due to the cyclical nature of the assessment process and its workload, much of the work initiated in 2003 is actually completed during 2004. For instance, we are confident that all 4,431 permits were inspected and valued for the January 1, 2004 assessment over a time frame that includes year 2004.

We believe that we already exceed the initial goal in recommendation #1. When all residential inspections are considered, the percent of inspections is 8.6%. Further, in light of our current workload responsibilities, if increased inspections were a legitimate

goal, more staffing would be required. It is also important to note the measurement of the efficiency and staffing needs of this department was not considered part of the audit.

Objective 3: Evaluate the Assessor's Office computerized mass appraisal system (CAMA) in terms of its compliance with State requirements and professional standards and the adequacy of controls over CAMA including any manual adjustments.

This objective is divided into three components:

1. Does CAMA comply with state requirements and professional standards for the determination of assessed values?
2. Does the assessment process include adequate controls over manual changes to CAMA computer-produced assessments?

We agree with the audit analysis that the CAMA system helps us produce values that comply with state and professional standards. The process to manually override assessed values is well controlled and supervised.

3. Are current computer and administrative controls over CAMA adequate?

The Assessor's Office has used versions of CAMA for the mass appraisal of residential property since 1978. We began the process of developing the up-to-date systems we currently use in 1996. Since that time we have concentrated our resources on enhancing the components of this system. Because of that the documentation exists but is somewhat fragmented. We were aware of the need for documentation long before the audit and are addressing it internally. We understand its importance and will continue to standardize and document these procedures as suggested in Recommendation #2.

Recommendation #3 would require a cyclical review of all property records. We question the cost-effectiveness of this approach and the increased accuracy it would achieve. As indicated previously, we have internal edit checks to monitor and find errors in data fields that impact a property's value. Also, the entire open-book and appeal process is the foundation of another form of validation from the taxpayers themselves.

Objective 4: How uniform are assessments within the City of Milwaukee?

To determine whether uniform assessments are made, the auditor conducted two limited ratio studies. One of the conclusions in the audit report indicates a perceived perception of a regressive assessment. To quote specifically from the audit:

"The results of the audit assessment ratio analysis for all 2003 residential sales within the City of Milwaukee indicate that properties with lower sales values tend to be assessed at values slightly above their market value. In contrast, this same analysis shows that

would benefit the assessment process to a large degree. A cost-benefit analysis would be necessary before expending tight resources. As demonstrated throughout this report, the current system not only meets, but also exceeds industry standards as managed. We believe that the increase in resources that this would require could be more effectively put to use in other areas of the assessment process.

Summary:

Overall we believe that the Comptroller's Audit confirms that the assessment process as currently employed and managed by the Assessor's Office meets the goal of producing accurate, uniform, and equitable assessments. The data analyzed shows that expectations established by the State of Wisconsin and assessment professionals are achieved and exceeded in our current processes. We appreciate the analysis and the opportunity to have our processes validated.

MAJOR CLASS COMPARISON FOR 2003

WISCONSIN DEPARTMENT OF REVENUE (THIR0003) BUREAU OF EQUALIZATION		AREA COUNTY CITY		77 SOUTHEASTERN 40 MILWAUKEE 251 MILWAUKEE		MAJOR CLASS COMPARISON FOR 2003				
2003	2002	2001	2000	PROPERTY CLASS	TOTAL ASSESSED VALUE (DOLLARS)	TOTAL STATE VALUE (DOLLARS)	MAJOR CLASS % OF TOTAL VALUE	CLASS LEVEL OF ASSESS (%)	ALL MAJOR CLASSES IN COMPLIANCE	MAJOR CLASS(S) OUT OF COMPLIANCE
				1-RESIDENTIAL	12,938,633,580	13,193,866,000	63.68	98.07		
				2-COMMERCIAL	6,493,804,441	6,848,201,600	33.06	94.82		
				4-AGRICULTURAL	0	0	***			
				5-SUM OF 5,6,7	0	0				
				P-PERSONAL	657,937,620	675,650,800	3.26	97.38	YES	NONE
				**T-TOTAL	20,090,375,441	20,716,919,400	100.00	96.98	YES	NONE
				1-RESIDENTIAL	12,027,394,755	12,179,747,500	63.06	98.75		
				2-COMMERCIAL	6,176,332,500	6,442,812,200	33.36	95.86		
				4-AGRICULTURAL	0	0	***			
				5-SUM OF 5,6,7	0	0				
				P-PERSONAL	687,529,360	690,962,100	3.58	99.51	YES	NONE
				**T-TOTAL	18,891,256,615	19,313,501,800	100.00	97.81	YES	NONE
				1-RESIDENTIAL	10,358,670,619	11,250,403,900	62.29	92.07		
				2-COMMERCIAL	5,716,180,475	6,076,193,800	33.64	94.08		
				4-AGRICULTURAL	0	0	***			
				5-SUM OF 5,6,7	0	0				
				P-PERSONAL	688,093,300	736,024,100	4.07	93.69	YES	NONE
				**T-TOTAL	16,762,944,394	18,062,621,800	100.00	92.80	YES	NONE
				1-RESIDENTIAL	10,292,622,989	10,178,852,600	61.98	101.12		
				2-COMMERCIAL	5,612,521,788	5,550,736,300	33.80	101.11		
				4-AGRICULTURAL	0	0	***			
				5-SUM OF 5,6,7	0	0				
				P-PERSONAL	701,672,320	693,598,200	4.22	101.16	YES	NONE
				**T-TOTAL	16,606,817,097	16,423,187,100	100.00	101.32	YES	NONE

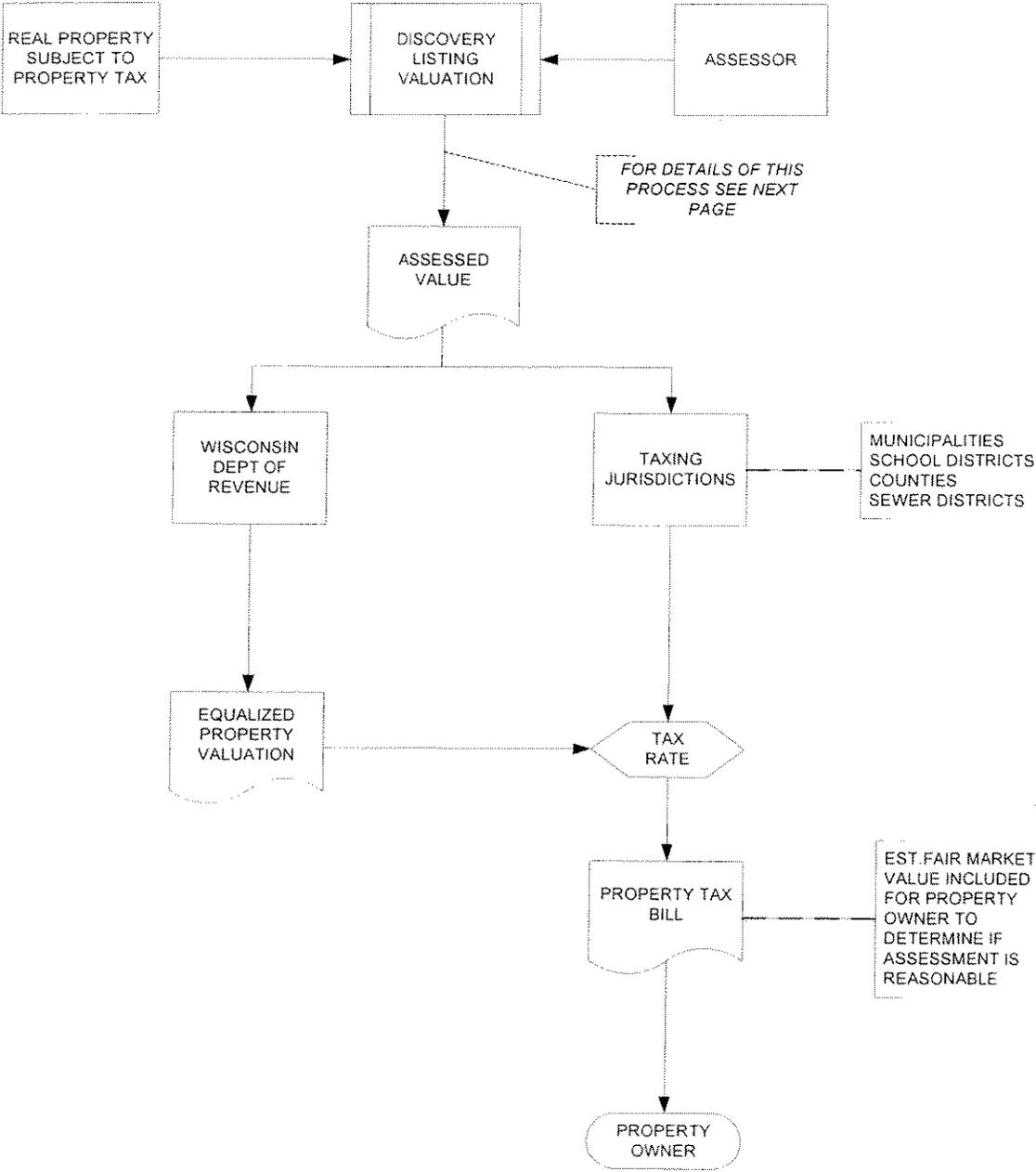
**TOTAL INCLUDES AG. LAND VALUE FOR THE PURPOSE OF CALCULATING MAJOR CLASS % OF TOTAL

***AGRICULTURAL CLASS OF PROPERTY IS NOT CONSIDERED A MAJOR CLASS FOR STATEFE

**Audit of Residential Assessment Process
Comparison of Selected City Areas
2003 Sales Versus 2004 Assessment**

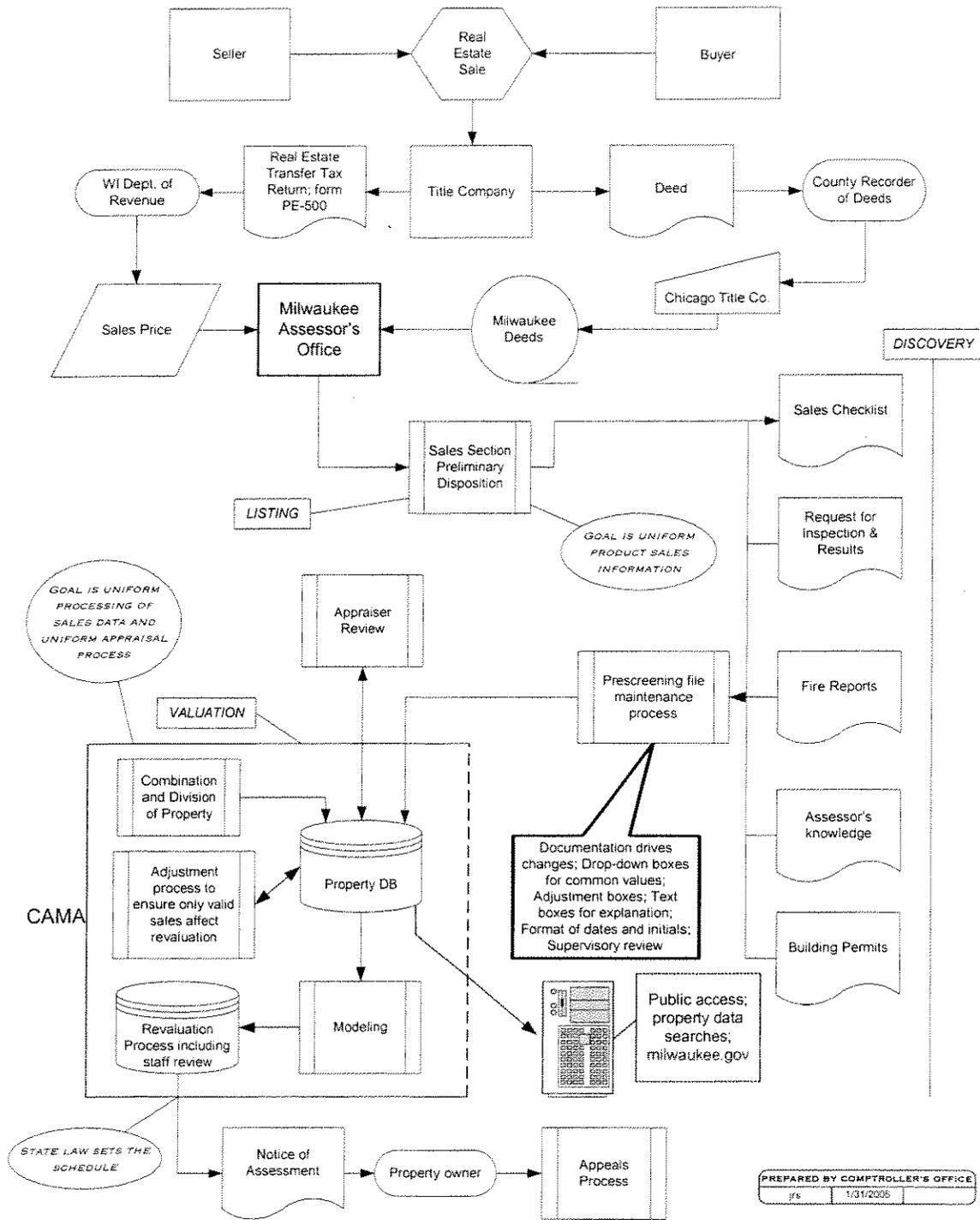
North Side		Total Sales	Valid Sales	Percent to Total	Inspected in 2003	Percent to Total	Sales Value	Assessed Value	Aggregate Ratio	C.O.D.	Absolute Percentage	Average Sales Price
NHHD												
440	48	66.7	14	29.2	4,944,800	4,885,200	98.8	5.2	7.0	154,525		
480	143	69	48.3	81	56.6	7,925,700	102.4	5.4	5.7	112,208		
1340	77	35.1	18	23.4	1,781,200	1,709,000	96.0	11.0	10.9	65,970		
1490	90	54	60.0	5	5.6	4,153,200	98.2	8.4	8.1	76,911		
1680	73	27	37.0	16	21.9	1,759,520	1,740,500	98.9	8.2	8.1	65,167	
3160	76	33	43.4	10	13.2	8,943,025	8,791,800	98.3	6.8	7.3	271,001	
Total North	507	242	47.7	144	28.4	29,324,114	29,130,000	100.9	7.2	7.5	121,174	
Central City												
2340	152	68.4	31	20.4	12,530,800	12,134,300	96.8	8.8	10.5	120,488		
2700	40	18	45.0	20	50.0	1,486,200	1,424,000	95.8	8.3	10.0	82,567	
2880	42	10	23.8	1	2.4	974,400	874,100	89.7	13.9	14.8	97,440	
2890	52	14	26.9	2	3.8	1,739,000	1,550,500	89.1	16.1	13.2	124,214	
2940	70	6	8.6	5	7.1	299,100	206,200	68.9	18.6	32.2	49,850	
2950	79	7	8.9	8	10.1	231,600	169,600	73.2	21.8	26.8	33,086	
Total Central	435	159	36.6	67	15.4	17,261,100	16,358,700	94.8	10.6	12.2	108,560	
South Side												
4020	29	6.9	4	13.8	187,500	101,000	73.5	4.4	26.4	93,750		
4340	144	103	71.5	4	2.8	14,705,750	14,673,200	99.7	5.8	5.5	142,774	
4420	165	121	73.3	19	11.5	13,822,430	14,329,800	99.0	6.9	14.3	114,235	
4500	52	30	57.7	13	25.0	3,732,900	3,573,700	95.7	9.5	8.6	124,430	
4720	45	33	73.3	14	31.1	3,759,902	3,751,500	99.8	4.5	4.3	113,936	
4780	43	31	72.1	5	11.6	4,914,600	5,005,900	101.9	4.2	4.1	158,535	
Total South	478	320	66.9	59	12.3	41,123,082	41,435,100	99.3	6.3	9.0	128,510	
Total Sample	1420	721	50.8	270	19.0	87,708,296	86,923,800	99.5	7.5	9.2	121,648	

OVERVIEW OF ASSESSING AND TAXING



PREPARED BY COMPTROLLER'S OFFICE		
JFS	1/31/2005	

Assessment Overview: Listing, Discovery, Valuation



Glossary of Terms

Term	Definition
Absolute Percentage	Measures the individual assessments and how close to market the assessment is. Ideally this percentage would be less than 5 percent.
Aggregate Ratio	Sales prices for all valid residential sales transactions occurring during a given year are totaled. Assessments are totaled for these same parcels. The total dollar value of assessments is divided by the total dollar value of sales and expressed as a percentage.
Appraisal	The estimation of market value
Appraised Value	An estimate of the value of a property before application of any fractional assessment ratio, partial exemption, or other such adjustment.
Assessed Value	The monetary amount at which a property is put on the assessment roll.
Assessment Ratio	(1) The ratio of the assessed value to an indicator of market value. (2) By extension, an estimated fractional relationship between the assessed values and market values of a group of properties. See also level of assessment.
Assessment Roll	The basis on which the property tax levy is allocated among the property owners in a jurisdiction with taxing powers.
Assessment-Sales Price Ratio	The ratio of assessed value to sale price (or adjusted sale price) of a property.
Assessor	The head of the assessing jurisdiction. Assessor may be either elected or appointed.
Assignment Area	An area within the City, also referred as an assessment area.
Board of Assessors (BOA)	A committee comprised of the supervisory staff of the Office of the Commissioner of Assessments, whose sole purpose is to review all written appeals by property owners to assessments made by the Office of the Commissioner of Assessments, and to complete and perfect the assessment roll.
Board of Review (BOR)	A committee of private citizens appointed by the Mayor and confirmed by the Common Council, whose task is to hear appeals of taxpayers (property owners) relative to assessments made by the Office of the Commissioner of Assessments, after review by the Board of Assessors.
CAMA System	A computer assisted mass appraisal system no matter where it is purchased or from whom. IAAO – a system of appraising property that incorporates computer supported statistical analyses such as MRA to assist appraisers in estimating value.
Central Tendency, Measure of	A single point in a range of observations, around which the observations tend to cluster. The three most commonly used measures of central tendency are the mean, median and mode.

Glossary of Terms

Coefficient of Concentration	The simplest and easiest way to measure uniformity of assessments is the coefficient of concentration (CC). This measure is expressed as the percentage of assessment sales ratios (individual properties) which lie within 15 percent of the median.
Coefficient of Dispersion (COD)	The average percent deviation from the median ratio.
Coefficient of Variation (COV)	The standard deviation expressed as a percentage of the mean.
Comparables, Comparable Sales	Recently sold properties that are similar in important respects to a property being appraised. The sale price and the physical, functional and locational characteristics of each of the properties are compared to the property being appraised in order to arrive at an estimate of value.
Control Procedures	Processing procedures established to insure the validity and accuracy of information being processed.
Exempt Property	Any parcel and improvements which is used for purposes exempt from local property tax as permitted under State law and a determination of exemption has been made by the Office of the Commissioner of Assessments.
Interior Inspection	The physical inspection of the parcel including a thorough examination/inspection of the interior of the buildings on the parcel in order to ascertain the true physical condition of those buildings.
Mean	The result of adding all the values of a variable and dividing by the number of values.
Median	The midpoint of middle value when a set of values is ranked in order of magnitude.
Mode	The most frequent occurring variable.
Model	A representation of how something works. For purposes of appraisal, a representation (in words or an equation) that explains the relationship between value or estimated sale price and variables representing supply and demand factors.
Outliers	Observations that have unusual values, that is, they differ markedly from a measure of central tendency. Some outliers occur naturally, others are due to data errors.
Price-Related Differential	The mean divided by the weighted mean.
Property Characteristics	Characteristics of a property which would affect the property's marketability, such as age, construction, condition, location, number of rooms, etc.
Real Estate Transfer Return	The real estate transfer return is required by the State Department of Revenue to be filed with the State upon transfer of any real property.
Rejected Sales	Both the State of Wisconsin (DOR) and the IAAO have indicated, that to make market value assessments, a sample of sales that truly indicate the market conditions should be used. To that end sales should be analyzed to reject those sales which are not indicative of market.

Glossary of Terms

Site Characteristics	Characteristics of (and data that describe) a particular property, especially land size, shape, topography, drainage, and so on, as opposed to location and external economic forces.
Tax Commissioner	The former name for the Commissioner of Assessments, a position appointed by the Mayor and confirmed by the Common Council. The Commissioner's sole responsibility is to oversee the entire assessment process in the City of Milwaukee.
Tax Key Code	The numerical method of identifying properties used by the City is identified by plat number, page and location.
Tax Roll	The list of all taxable properties in the City and their respective assessed valuations as of January 1, which is kept by the Office of the City Treasurer.
Uniformity of Residential Assessments	For the purposes of the audit, "uniformity" measures the consistency of assessment-to-sales ratio for 2003 sales within a given group of city properties (Example: by value of sale, by neighborhood location; by age of property, etc.
Valid Sales	"Arms length" sales where the sale price has not been discounted or marked-up over true market value. Valid sales generally do not include foreclosure, inter-family and estate sales which could be construed as sales made under distressed circumstances.
Wis. D.O.R.	Wisconsin Department of Revenue
Wi.Stat or Statutes	Wisconsin Statutes