

Market

Value

and

Mass

Appraisal

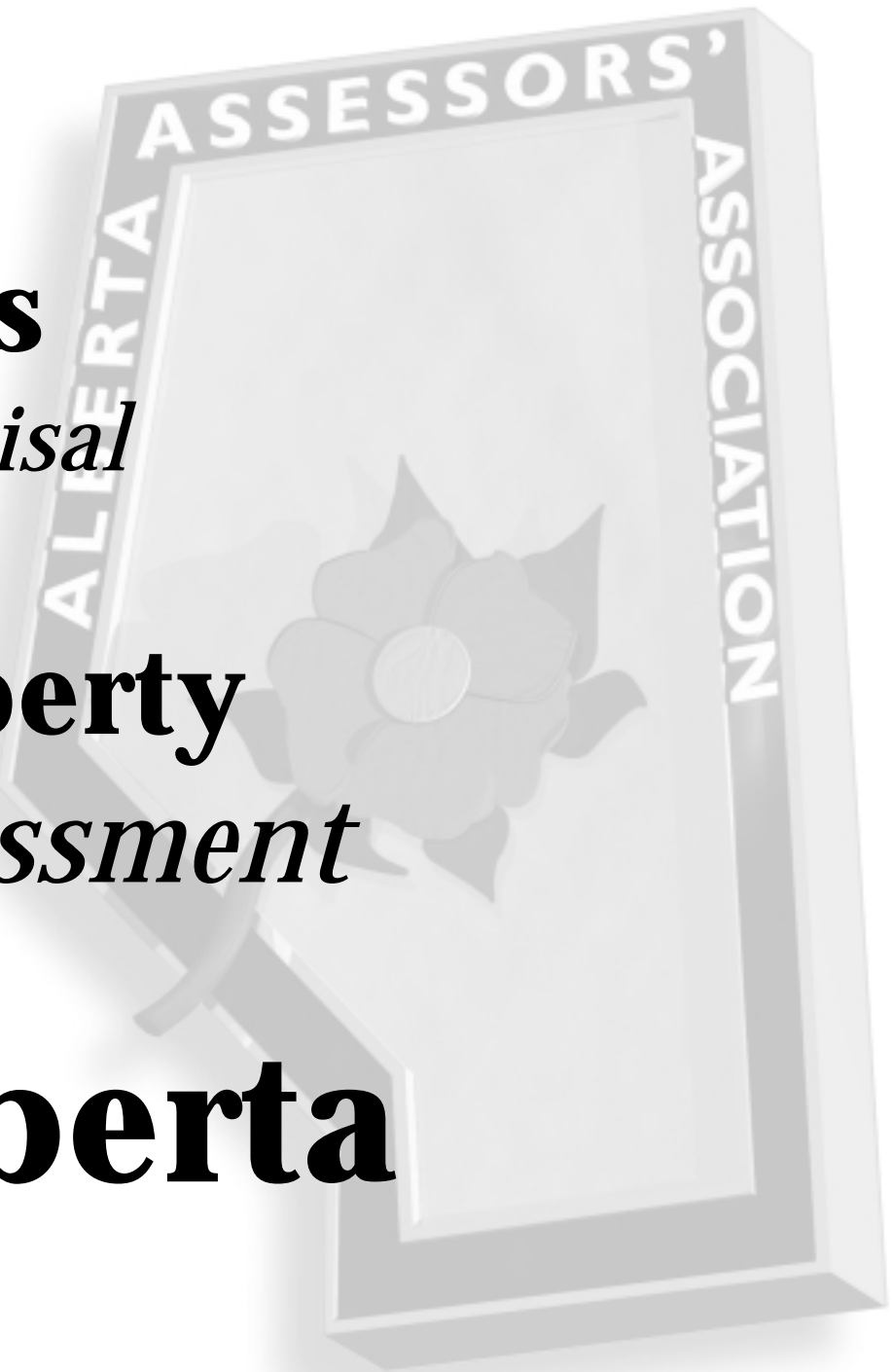
for

Property

Assessment

in

Alberta



INTRODUCTION

TABLE OF CONTENTS

	Page
Purpose of This Handbook	1
1.0 Basic Concepts	4
1.1 Functions and Characteristics of Assessment and Taxation	4
1.2 Assessment.....	5
1.3 Assessment Process.....	5
1.4 Valuation Fundamentals.....	6
1.4.1 Market Value.....	6
Definitions	6
Fee Simple Estate.....	7
Difference Between Market Value and Sale Price	8
Establishing Market Value.....	8
Value in Use, Value in Exchange, Investment Value.....	9
Limited Market and Special Purpose Properties	10
Difference Between Real Estate, Real Property, and Personal Property	11
Highest and Best Use Analysis.....	12
1.4.3 Mass Appraisal.....	13
Mass Appraisal and Single-Property Appraisal.....	13
1.4.4 Three Approaches to Value	16
Sales Comparison Approach	16
Income Capitalization Approach.....	20
Cost Approach	27
2. Data and Data Management.....	30
2.1 Data	30
2.1.1 Analyze Available Resources.....	30
2.1.2 Select and Collect Appropriate Data	30
General Data	31
Specific Data.....	31
2.1.3 Sources for Data	34
2.2 Data Integrity/Data Verification	35
2.2.1 Property Data Verification.....	35
2.2.2 Sales Verification	35
2.2.3 Income and Expense Verification.....	36

2.3	Data Management.....	36
3.0	Valuation	37
3.1	Mass Appraisal	37
3.1.1	Inferences	37
3.2	Model or Formula Specification and Calibration.....	38
3.3	Preliminary Analysis.....	39
3.3.1	Stratify Properties into Appropriate Groups	39
	Geographic Stratification	39
	Stratification by Property Types	39
3.3.2	Exploratory Data Analysis.....	40
3.4	Valuation	40
3.4.1	Introduction	40
3.4.2	Select the Appropriate Model Form	40
	Considerations by Property Types.....	41
3.4.3	Analyze the Data/Calibrate the Model.....	41
	Multiple Regression Analysis (MRA).....	41
	Adaptive Estimation Procedure (AEP or feedback)	43
	Location Value Response Surface Analysis (LVRSA).....	43
3.4.4	Verifying the Models.....	43
3.4.5	Market Value Estimate - Choosing the Best Approach	45
3.4.6	Apply Model Results to the Population	45
3.5	Validation	46
3.5.1	Quality Assurance	46
3.5.2	Ratio Studies	47
	Assessment Uniformity	47
	Horizontal & Vertical Equity	47
3.5.5	Standards	48
	Legislated	48
	Industry	48
4.0	Assessment Administration, Appeal, and Taxation	50
4.1	Assessment Administration	50
4.2	Valuation Date.....	51
4.3	Assessment Notices and the Roll.....	52
4.4	Assessment Appeals	53
4.4.1	Complaints Against the Assessment.....	53
4.4.2	Defense of Assessments	54
4.4.3	Comparables.....	55
4.5	Taxation.....	55
5.0	Legislation and Regulations.....	56

5.1	The Municipal Government Act.....	56
5.1.1	Definitions.....	56
5.1.2	Preparation Of Assessments.....	59
5.1.3	Preparation of Supplementary Assessments.....	61
5.1.4	Equalized Assessments.....	62
5.1.5	Linear Property.....	62
5.1.6	General Powers of Minister Relating to Assessments and Equalized Assessments.....	62
5.1.7	Non-Assessable Property (section 298 of the MGA).....	63
5.1.8	Taxation Exemptions.....	63
5.1.9	Assessment Review Boards/Municipal Government Boards.....	63
5.2	Applicable Regulations.....	64
5.2.1	Standards Of Assessment Regulation (AR 365/94).....	64
5.3	Other Assessment Regulations.....	66
	Assessable Property Regulation 367/94.....	66
	Property Tax Exemption Regulation 368/94.....	66
	Assessment Equalization Regulation 366/94.....	66
5.4	Other Relevant Legislation.....	66
5.4.1	Freedom Of Information And Protection Of Privacy Act (FOIP)....	66
5.4.2	Municipal Bylaws.....	67
	Glossary of Mass Appraisal Terms.....	68

Purpose of This Handbook

Property assessment is the cornerstone of municipal financing. Therefore, the importance of ensuring that the highest quality assessment services are provided to every urban and rural municipality cannot be overemphasized.

For the benefit of all clients of the assessment industry (including taxpayers, mayors, reeves, council members, other assessment jurisdictions, Alberta Municipal Affairs, the tribunals, and the courts), it is critical that assessors for urban and rural municipalities throughout the province make a concerted effort to ensure that their respective assessment bases are as fair and equitable as possible in order to:

- Enable council members to assure their constituents that each is being held responsible for only his or her fair share of municipal taxes.
- Enable council members to assure their constituents that the portion of their tax levy that municipalities collect on behalf of the Province of Alberta for education funding represents only the property owners' fair share of taxes for those purposes.
- Ensure the provision of a stable tax base to benefit all municipalities and their citizens.

Tax revenue losses would inevitably result if tribunals and courts find inequities in the assessment base. Developing assessment bases of the highest quality will minimize such losses.

The Municipal Government Act (MGA), S.A. 1994, Chapter M-26.1, effective January 1, 1995, requires that Alberta assessors prepare property assessments on a market value standard. The Standards of Assessment Regulation (AR 365/94) requires the use of mass appraisal techniques to prepare these assessments. Given these developments, the Alberta Assessors' Association believed it timely to prepare this handbook to ensure that assessors serving urban and rural municipalities throughout the province of Alberta are provided with:

- Information to assist all assessors in developing a consistent understanding of market-value-based assessments and mass appraisal techniques to achieve fair and equitable assessments.
- Information regarding preferred approaches for valuing various property types wherever they may be located in Alberta, and, to assist in addressing administrative issues facing all assessment jurisdictions as they prepare market value assessments in accordance with the Municipal Government Act.

The Association wishes to ensure that valuation principles are applied by assessors throughout the province in an objective, independent and consistent manner. Therefore, this handbook provides comprehensive information:

- To assist assessors and administrators for all municipalities in providing the highest quality assessments.
- Outlining legislative provisions governing assessment practices and procedures in Alberta.
- Explaining the concept of market value as a valuation standard and how mass appraisal techniques are used to estimate market value.
- To assist the assessment industry's clients in understanding the benefits of market value assessments and the critical differences between assessment and taxation.

The "Introduction" section is designed as a general guide outlining the assessment process with respect to a wide range of properties and valuation procedures. As such, all the information contained in this document may not be applicable to every property type.

The section of this handbook entitled "Valuation Guides" provides information on preferred approaches for preparing valuations for various property types.

The section of this handbook entitled "Administrative Guides" provides information on preferred approaches for addressing various administrative issues facing all assessment jurisdictions in Alberta.

This handbook and the associated guides are not intended to be a substitute for an assessor's judgment in arriving at an assessed value for a particular property.

This handbook must be used in conjunction with relevant Alberta legislation and accompanying regulations, and in conjunction with the assessment standards advocated by the International Association of Assessing Officers (IAAO). This handbook is not intended to provide a fully detailed explanation of the valuation process. Assessors must be familiar with all three approaches to value (income, sales comparison, and cost) and mass appraisal techniques in order to achieve the maximum benefit of applying the information contained in this handbook.

To make this handbook as valuable and current as possible, assessors are encouraged to provide the Alberta Assessors' Association with ongoing feedback and suggestions for improvement. The handbook will be updated on a periodic basis with amendments supported or initiated by the Alberta Assessors' Association.

Please forward feedback and suggestions for amendments to:

Alberta Assessors' Association
#166 - 14315 - 118 Avenue
Edmonton, Alberta
T5L 4S6

Phone (403) 483-4222

Fax (403) 487-7505

Email: membership@assessor.ab.ca

1.0 Basic Concepts

1.1 Functions and Characteristics of Assessment and Taxation

An assessment is the taxable value of property in accordance with legislation. The provincial government mandates the assessment of property for the purposes of levying a “value based” or ad valorem tax. In an ad valorem tax system the amount of property tax paid should directly depend on the market value of property owned. Property taxes are levied to provide money for local public services and for the province-wide cost-shared education funding program.

Property taxes traditionally have been a major source of government revenues because:

1. Real estate is easily located.
2. Taxing property is an efficient and cost-effective way of collecting revenues.
3. They are comparatively simple and easy to understand.
4. They tax real estate wealth, which balances income or consumption taxes.
5. Most people view them as fair.

To move towards a more equitable property tax system, Alberta has adopted the "market value" standard for property assessment. This is the preferred valuation standard in most jurisdictions in North America.

Assessment and taxation are governed by the Municipal Government Act and its companion regulations. Assessed values are to be determined in a consistent and fair manner throughout the province. Throughout Alberta, mass appraisal techniques must be applied to arrive at market value (AR 365/94). Tax rates vary from municipality to municipality. Tax rates may differ for residential, non-residential, and farm property. Tax rates or tax exemptions must not influence the valuation process.

1.2 Assessment

Assessment is the process of estimating the value of property for equitable distribution of the municipality's total property tax requirement, including provincial requisitions.

While most property is to be assessed at market value, some property types are regulated to be assessed as specified in the MGA. This handbook explains the assessment process for all types of property in Alberta.

In Alberta, assessment is a local responsibility with one exception — Alberta Municipal Affairs is responsible for assessing linear property such as pipelines, electric power, transmission lines, and telecommunications equipment.

Alberta Municipal Affairs also ensures that valuation standards are met through assessment audits.

While some jurisdictions in Canada assess at a percentage of market value, Alberta assessments are pegged at 100 percent of market value. Full-value assessments are preferred because they assist property owners in determining whether or not their assessments are correct.

1.3 Assessment Process

- Inventory:
 - Analyze available resources.
 - Select and collect appropriate data.
 - Stratify properties into appropriate groups.
 - Highest and best use analysis.
- Valuation:
 - Select the appropriate approach(es) to value.
 - Select the appropriate model form.
 - Analyze data/calibrate the model.
 - Verify the models.
 - Market value estimate.
 - Apply model results to the population.
- Validation:
 - Quality assurance.

- Ratio studies.
 - Assessment uniformity.
 - Horizontal & vertical equity.
 - Standards.
- Apply values to the roll.

1.4 Valuation Fundamentals

1.4.1 Market Value

Market value is a means by which taxpayers may evaluate their assessment by referring to an objective standard. If all properties meet the market value standard, all properties are equitably assessed, regardless of whether they are similar.

Definitions

Municipal Government Act (MGA)

Market value is defined in section 1(n) of the MGA as:

“... the amount that a property¹ might be expected to realize if it is sold on the open market by a willing seller to a willing buyer.”

Implicit in this definition is the consummation of a sale as of a specific date, transferring the title from the seller to buyer under conditions whereby:

- There has been sufficient time for exposure in the open market.
- The buyer and seller are not subject to undue pressure.
- The buyer and seller are both well informed.
- Payment is consistent with the standards of behavior of the market.

¹ Property is defined in section 284(1)(r) of the MGA and in section 2.3.1B of this handbook.
Market Value and Mass Appraisal Introduction – June 1998

From the perspective of the purchaser, market value is generally viewed as a guarantee that the purchaser will have control over how the property will be used in the future.

The seller would also have considered probable future uses in setting the asking price and in the negotiation of the sale price.

International Association of Assessing Officers (IAAO)

The following definition given by the IAAO *Standard on Mass Appraisal of Real Property*² (1984) supports the market value definition given by the MGA:

The most probable price expressed in terms of money that a property would bring if exposed for sale in the open market in an arm's length transaction between a willing seller and a willing buyer, both of whom are knowledgeable concerning all the uses to which it is adapted and for which it is capable of being used.

Fee Simple Estate

Real property includes all interests, benefits, and rights inherent in the ownership of physical real estate. Interests vary, so real property includes a bundle of rights which include the right to use it, sell it, lease it, or choose to exercise all or none of these rights. The bundle of rights is limited by taxation, expropriation, police power, and escheat.

Section (b) of AR 365/94 directs assessors to estimate the value of fee simple estate in the property. The three main components of real property rights are ownership entities, financial interests and legal estates. A fee simple estate is the ownership of real property rights unencumbered by any other interest or estate.

Lease interests result when the bundle of rights is divided by a lease. The lessor and the lessee each obtain interests, which are stipulated in contract form and are subject to contract law. The divided interests resulting from a lease represent two distinct but related estates of property — the leased fee estate and the leasehold estate. The leaseholder, or tenant, receives the right to use the real estate for specific purposes over a defined period of time, but is obliged to pay rent for the right. The leased fee estate is the lessor's, or landlord's estate. A leased fee estate is an ownership interest held by a landlord with the right of use and occupancy conveyed by lease to others.³

² *Standard on Mass Appraisal of Real Property*, Approved March 1984.

³ The Appraisal of Real Estate.

The majority of property transactions in an open real estate market involve estates in property which are less than fee simple or involve the fee simple estate with registered encumbrances. A property's land title can be encumbered by a mortgage, caveat, utility right-of-way, encroachment agreement, etc. For income producing property, encumbered by "leases", it is the leased fee estate that usually sells, not the fee simple estate. By definition, once a property is encumbered with leases, the owner's interest is reduced to that of the leased fee estate. Note, however, that the leased fee estate can either fall short of or exceed the value of the fee simple interest, depending on the value of the rights conveyed relative to the contract rent.

The sum of the value attributable to the leased fee estate (lessor interest) and leasehold estate (lessee interest) is usually equivalent to the value of the fee simple estate. Market rents are used in the valuation of the fee simple estate because market income estimates eliminate the possibility of any value attributable to a leasehold estate.

Difference Between Market Value and Sale Price

Market value is a range of probable selling prices, not a specific price. If the market is reasonably competitive, prices can be strong evidence of market value. A sale price is the amount the purchaser agrees to pay and a particular seller agrees to accept under the circumstances surrounding their transaction. Sale price is a historical fact — the figure that a particular buyer and seller agreed to in a particular transaction. Market value is the value created by the collective actions of the market.

Establishing Market Value

In estimating market value there is a need to have an understanding of the market or trading area for a property type. A real estate market is the interaction of individuals who exchange real property rights for other assets such as money. Some properties are compared or grouped with only those properties in the immediate area; other properties are compared or grouped with similar properties in a much broader area. When market boundaries cross over jurisdictions, the assessors from both jurisdictions should discuss the valuation issues to arrive at the best estimates of value. When the market for a property or group of properties extends beyond the borders of a municipality, the assessor should attempt to gather and use market evidence from a broader market. When a submarket, such as a residential neighbourhood, spans adjoining municipalities, the assessors of the municipalities should coordinate the valuation of properties in the neighbourhood.

Value in Use, Value in Exchange, Investment Value

Value in Exchange

Market value is value in exchange.

Value may be defined as the relationship between a thing desired and a potential purchaser. Value in exchange is the amount of goods and services or purchasing power that an informed purchaser would offer in exchange for economic goods under given market conditions. It is the ratio of exchange on one commodity for another. There must be a comparison with another economic good or goods and alternatives from which a potential purchaser can choose. Value in exchange is market determined. The price at which an economic commodity exchanges in a free competitive market is its value — its capacity to command other commodities in exchange. Therefore, value in exchange is represented by market value in real estate appraisal.⁴ Value in exchange, represented by market value, looks at the transaction from the point of view of the purchaser.

Value in Use

Value in use is the value of an economic commodity to its owner-user that is based on the productivity (income potential, utility, or amenities) of the economic commodity to a specific individual. Value in use is approached from the viewpoint of the owner-user; it is the amount of money that the owner of the rights in real property would pay to continue the enjoyment of those rights. Value in use focuses on the value the real estate contributes to the enterprise of which it is a part, without regard to the property's highest and best use or the monetary amount that might be realized upon its sale.

Investment Value

Investment value is a subjective relationship of specific value to a particular investor based on his or her particular investment requirements. Investment value is the value to the individual; market value is the value in the marketplace. Investment value may be more or less than market value depending on factors such as the investor's income tax position. To estimate investment value, specific investment criteria must be known. Market value and investment value may coincide if the client's investment criteria are typical of investors in the market.

⁴ Basics of Real Estate Appraisal

Limited Market and Special Purpose Properties

Limited-Market Properties

Limited-market properties are properties that have relatively few potential buyers at a particular time.⁵ A property may be a limited-market property because of unique design features or changing market conditions. Large manufacturing plants and research and development facilities are examples of this type of property, which typically appeals to relatively few potential purchasers and requires lengthy market exposure.

Market value for limited-market properties is based on their highest and best use; however, due to the relatively small market for these properties, often there is little market evidence to support a market value for the current use. These limited-market properties can be valued by comparison to market properties which sell more frequently (with an appropriate adjustment for extra time on the market), or by a more extensive search for market evidence.

Special-Purpose Properties

Special-purpose properties are those that have unique designs, special construction materials, or layouts that restrict their utility to the use for which they were originally built. They have limited conversion potential. Examples are houses of worship, schools, museums, and public buildings. If a property's use is so specialized that there is no demonstrable market for it, but the use is viable and likely to continue, an estimate of value in use to the owner is the only alternative. Such an estimate is not necessarily an indication of value in exchange.

⁵ *The Appraisal of Real Estate*

Difference Between Real Estate, Real Property, and Personal Property

Not all elements of a property are assessable in Alberta. When establishing a market value for assessment purposes it is important to understand what is assessable and to determine the market value attributable to those assessable items.

Real Estate

Real estate is defined as the physical land and appurtenances affixed to the land. Real estate is immobile and tangible. This definition of real estate closely conforms to the definition of “property” in the MGA.

Real Property

Real property includes all the rights, interests and benefits inherent in the ownership of physical real estate. A person who holds all the property rights has the fee simple estate. The valuation of the fee simple estate in real property is the intent of the MGA and the standards regulation (AR 365/94) which defines market value as the fee simple estate of physical land and/or improvements.

Personal Property

Personal property is all movable items of property that are not permanently affixed to, or part of real estate. Personal property is moveable without damage to itself or to the real estate to which it is affixed. Personal property is not endowed with the rights of real property ownership and is not generally assessed (with the exception of machinery and equipment).

Highest and Best Use Analysis

Highest and best use is driven by the market and may be defined as the most reasonable, probable and legal use of either a vacant or improved parcel. The use must be physically possible, financially feasible (must be a probable use and not a highly unlikely or speculative use) and generate the highest value to the property over a period of time.

In general, for assessment purposes, the highest and best use of the property is considered to be the current use of the total property.

To determine the highest and best use of an improved property, the value of the land is estimated as if vacant and is compared to the value of the improved property. Land value as if vacant is established based on optimum potential, rather than actual use. As long as the property's improved value exceeds the value of the vacant land, the property's highest and best use can be considered its current use. When the value of the vacant land starts to exceed the value of the improved property, the highest and best use of the property is that of a re-development site (the site as though vacant).

In this case the property would be valued as vacant land for the purpose of redevelopment.

The highest and best use of a property may change as the economy, neighbourhood, or property change. In preparing annual general assessments the highest and best use of properties in transition should be reviewed annually and appropriate changes in the assessed value made if required.

The highest and best use of special-purpose properties, which are only appropriate for one use or for a very limited number of uses, is generally the continuation of the current use, if that use remains viable. In order to estimate market value, it may be necessary to undertake another highest and best use based on conversion of the property to an alternate use. This converted alternative use would be one for which there was effective market demand and, would, form a basis for market value.

1.4.3 Mass Appraisal

Mass appraisal is the process of valuing a group of properties, as of a given date, using standard methods and statistical testing.

Mass Appraisal and Single-Property Appraisal

Assessors need skills in both mass appraisal and single-property appraisal. They need mass appraisal skills to produce initial values in a re-assessment. They need single-property appraisal skills to defend values before tribunals and to appraise special-purpose properties. Single-property appraisal is the valuation of a particular property as of a given date; mass appraisal is the valuation of many properties as of a given date, using standard procedures and statistical testing. Both require market research. The principle differences are in scale and quality control.

The scale of mass appraisal often requires that many people work on the process. This requires synchronization of both research tasks and appraisal judgment. In the single-property approach, only one person need perform all research tasks and make all appraisal judgments. Also, mass appraisal requires standardized procedures across many properties. Thus, valuation methods developed for mass appraisal purposes must represent supply and demand patterns for an entire class or group of properties rather than a single property; it must look to the typical property.

Quality is measured differently in mass and single-property appraisal. In mass appraisal, statistical methods are used to measure deviations of all sales in the population data base from their mass-appraised values. If most mass-appraised values for properties which have sold fall within a predetermined average deviation from actual sale prices, work quality is considered good. The focus is not on the individual property. In single-property appraisal, quality can usually be judged by a comparison with sales of comparable properties. Both mass and single-property appraisal can be judged by their adherence to professional standards.

Both mass and single-property appraisal are exercises in applied economic analysis. They represent logical, systematic methods for collecting, analyzing, and processing data to produce intelligent, well-reasoned value estimates.⁶

⁶ Property Appraisal and Assessment Administration.

The following chart outlines the similarities and differences between mass and single-property appraisal:

Mass Appraisal	Single-Property Appraisal⁷
1. Definition of the Problem	
<ul style="list-style-type: none"> · Appraise all assessable property in the district · Assume fee simple rights in all cases · Standard date specified · Appraise for property tax purposes · Market value or other standard specified · Limiting conditions specified 	<ul style="list-style-type: none"> · Identify and locate the real estate · Identify property rights to be valued · Establish date(s) of value estimate(s) · Identify the purpose of the appraisal · Define the value(s) to be estimated · Identify limiting conditions.
2. Preliminary Analysis and Plan: Select and Collect Data	
<ul style="list-style-type: none"> · Build and maintain comprehensive computerized records on all assessable land parcels and buildings; · Maintain computerized sales file, collect rental data; · Maintain computerized cost schedules, monitor market trends 	<ul style="list-style-type: none"> · Decide on analyses and valuation methods; · Collect necessary data on general market, subject property, and any comparable properties including sales, rents and costs. · Little need for a comprehensive data base.
3. Estimate of Highest and Best Use	
<ul style="list-style-type: none"> · Use (usually highest and best use) specified; · Uses that are the basis of valuations are recorded during field inspections and maintained in property records. 	<ul style="list-style-type: none"> · Estimate highest and best use, based on site specific analysis.
4. Estimate of Land/Site Value (as Defined)	
<ul style="list-style-type: none"> · Specify land valuation models · Collect and analyze available market data using recognized methods, and develop basic rates and adjustment factors - in computerized format · use maps (often computerized) to display and help analyze data · Use CAMA system to apply model(s). 	<ul style="list-style-type: none"> · Estimate land value on a case-by-case basis.
5. Estimate of Improved Property Value (as Defined)	
<ul style="list-style-type: none"> · Specify several valuation models; · Use CAMA to develop and apply models 	<ul style="list-style-type: none"> · Estimate improved property value on a case-by-case basis
6. Reconciliation of Value Indicators: Estimate of Defined Value	
<ul style="list-style-type: none"> · Choose best approach. · Test valuation models in other ways, including ratio studies. 	<ul style="list-style-type: none"> · Use as many of the three approaches to value as are applicable, evaluate the supportability of each approach and the indicated value, and choose the best indicator of value or choose another figure.
7. Report of Estimate(s) of Value as Defined	
<ul style="list-style-type: none"> · Minimum documentation of each value is assessment roll entry and assessment notice; taxpayers can request a copy of their property record; · A mass appraisal summary report, which is a narrative describing the valuation program in general, is recommended; · Considerable additional documentation exists in data files and tables in CAMA systems. 	<ul style="list-style-type: none"> · Appraisals can be reported in a number of ways, ranging from a form to a full narrative report.

⁷ The Uniform Standards of Professional Appraisal Practices

1.4.4 Three Approaches to Value

The three approaches to value described below are used for single property valuation purposes⁸. Each approach is to some extent related to the other two approaches and must be market-based to have any relationship to market value.

For the assessment of specified types of properties, farmland, linear property, railway property, and machinery & equipment, a fourth method has to be employed.

These types of properties are valued by applying regulated rates provided in the Minister's Guidelines (AR 365/94).

Sales Comparison Approach

The use of market transactions to estimate market value makes the sales comparison approach the primary approach for many property types. However three factors limit the usefulness of the approach:

- Certain property types do not frequently sell and there is not sufficient data for the comparison process.
- The comparison process used in a mass appraisal process generally requires more extensive sales data than a single-property appraisal.
- Some sales may not be good indicators of market value.

When sufficient, reliable data is available, and property types are relatively homogenous, the sales comparison approach provides a reliable indication of market value.

Procedure

- Research the market to obtain information on sales transactions, listings, and offers to purchase or sell properties.
- Verify the information by confirming that the data obtained is factually accurate and that the transactions reflect arms-length market considerations.
- Adjust the elements of comparison for each comparable property to the equivalent of:

⁸ Single property valuation methodology, terminology, and definitions were prepared with reference to the book "Appraisal of Real Estate", published under the auspices of the Appraisal Institute of Canada.

- (a) Fee simple estate (for example, market rents).
 - (b) Payment consistent with standard behaviour of the market. Use quantitative and qualitative analytical techniques to identify and measure adjustments.
- Choose a unit of comparison and an analytical technique that produce results most consistent with market behaviour (if there are widely divergent results for a given property type, further investigation may be required).

Units of Comparison

To facilitate the comparison, property has to be reduced to a common basis. The units of comparison are the components into which a property may be divided for the purpose of comparison. The units of comparison depend on the type of property being valued. Some examples are as follows:

- Residential - per square foot of above-grade area.
- Multi-family - per apartment unit, per room, per square foot (gross and rentable).
- Warehouse/industrial - per square foot, per cubic foot.
- Land - per square foot, per front foot, per acre, per square foot of developable building (existing and potential).
- Office buildings - per square foot (gross and rentable).
- Shopping centres - per square foot of gross leaseable area.
- Hotels/motels - per square foot, per room.
- Theaters/auditoriums - per square foot, per seat.
- Manufactured home communities - per square foot, per site.

Elements of Comparison

Elements of comparison have to be investigated as each can have an impact on the sale price. The elements of comparison are the characteristics of properties and transactions that cause the prices paid for real estate to vary. The basic elements of comparison, which should always be considered in sales analysis, are:

- Real Property Rights Conveyed

A transaction price is always predicated on the real property interest conveyed. Income-producing property may be sold subject to existing leases. The revenue generating potential of a property is often fixed or limited by the terms of existing leases.

To value the fee simple estate, the sales used for income producing properties must reflect market rents or the net revenue to the owner in respect of the assessable real estate. Thus, the rent structure, or revenue, of each candidate sale must be examined to see if contract rents are at market levels and reflect net income to the owner. Vacancy rates and operating costs must also represent current market⁹ conditions. If all leases have been recently negotiated, it may be safe to assume that the property is operating at market levels. A rapidly changing market or the presence of long-term leases could require an adjustment to the sale price or invalidate a sale for comparison purposes. In the appraisal of income-producing property, it is the leased fee estate and the revenue attributable to the entire enterprise value of the property (both tangible and intangible interests), which is most frequently valued for purposes other than assessment. Caution and careful analysis of rents and incomes are required where properties are sold subject to existing leases.

- **Financing Terms**

The transaction price of one property may differ from that of an identical property due to different financial arrangements. The purchaser of a comparable property may have assumed an existing mortgage at a favorable interest rate or obtained a low down payment. Conversely, interest rates at above market levels can result in lower sale prices. Sales with non market financing are compared to other sales transacted with market financing to determine whether an adjustment is warranted. Market evidence is the best indicator for such an adjustment.

- **Conditions of Sale**

Adjustments for conditions of sale usually reflect the motivations of the buyer and seller. A developer may pay more than market value for lots needed in a site assemblage because of the anticipated value of plots resulting from the greater utility of the larger site. In many situations the conditions of sale significantly affect transaction prices. When non-market conditions are detected in a transaction, the circumstances must be researched to quantify the adjustment or the sale will be excluded.

⁹ It is theoretically possible to adjust sale prices for non-market rents. In addition to deciding whether contract rents are at market levels, the appraiser must analyze the leases to determine the effect of non-market rents on sale prices.

- **Market Conditions/Time of Sale**

An adjustment may be required if price levels have changed between the sale and the valuation date. Market analysis is required to determine the appropriate time trend. Several good mass appraisal techniques are available.

- **Location**

A property's location is analyzed in relation to the location of other properties. To evaluate the desirability of one location relative to other locations, sales of physically similar properties in different locations are analyzed. The percentage difference in land values between two locations may be an indicator of an adjustment being required.

- **Physical Characteristics**

If physical characteristics of a comparable property and the property being valued are different, then each difference must be isolated and an adjustment must be made. These physical characteristics could include building and land size, condition, age, design and quality of workmanship, and materials. The value added or lost by the presence or absence of an item usually does not equal the cost of installing or removing the item.

- **Non-Realty Items**

These are items that do not constitute real property but are included in the sale price. Furniture, fixtures, and equipment in a hotel or restaurant are typical examples of personal property; so are stoves, refrigerators, and drapes for houses. The value of non-realty items has to be recognized, estimated, and then deducted from the sale price.

Sales Comparison Approach from a Mass Appraisal Perspective

A group of similar sold properties are analyzed to determine what effects certain attributes have on value. A general model or equation is developed to incorporate all of the attributes that affect sale prices. The model can then be used to estimate the value of properties that have not sold. Statistical testing on the values produced can validate the model or equation.

Having comparable data is critical to the success of this approach. Computer software is available to effectively accumulate and sort types of properties. However, property and sales data must be verified and information analyzed to ensure comparability.

Income Capitalization Approach

Introduction

The basis of the income capitalization approach is that the value of an investment property reflects the quality and quantity of the income that the property is expected to generate. The higher the income the higher the value, providing the amount of the risk remains constant. The purchase of investment property is trading present dollars with the expectation of receiving future dollars. The income capitalization approach uses future income to determine the value of the property today, converting future benefits to present value. The earning history of a property is only important because it provides an indication of what will happen in the future (principle of anticipation).¹⁰

Overview

The gross income that a property is earning is determined and then compared to the earnings of other similar properties to estimate the amount that the property should earn.¹¹ Deducted from this prospective potential gross income are an allowance for vacancy and collection losses and the expenses necessary to operate the property. As with income, expenses should reflect the expected future circumstances based on the subject property's past and present performance, and should also be compared to the expenses of similar properties. The resulting net operating income is an estimate of the property's earning capacity free of debt and before income taxes.

Capitalization is the process whereby this annual net income is converted into a lump-sum value for a property. The investor's ultimate objective is a total return that exceeds the amount invested. This expected return consists of the recovery of the amount invested (return **of** capital) and a profit (return **on** capital).

The **return of capital** may be recaptured through annual net income, or it may be recaptured all or in part through the resale of the property at the termination of the investment. If the investment can be recaptured fully upon resale (the property value does not change), then all annual net income can be attributed to return on capital. If it is anticipated that property values will decline, some of the annual net income will have to be used for capital recapture. If an

¹⁰ The principle of anticipation is that value is determined by the anticipated future benefits to be derived from a property.

¹¹ For assessment purposes, potential gross income is income based on market rents. Actual gross income is based on actual rents.

investor anticipates an appreciation in property values, the rate of return on capital will be more than that attributable to the annual net income.¹²

The **return on capital** is the additional amount received as compensation for use of the investor's capital until it is recaptured. The return on capital should be sufficient to attract investment capital. The return on capital is influenced by factors such as degree of apparent risk, market attitudes to future inflation, the prospective rates of return for alternative investments, the rates of return earned by comparable properties in the past, and the supply and demand of mortgage funds. The rates of return represent prospective rates, not historical rates, and reflect the marketplace's perception of risk and purchasing power. Higher rates of return are thus required for less desirable properties and lower rates of return for more desirable properties.

¹² The principle of anticipation is that value is determined by the anticipated future benefits to be derived from a property.

Capitalization Methods

Direct Capitalization

This method converts an estimate of a single year's income expectancy into an indication of value in one direct step. This is achieved by either dividing the income estimate by an appropriate income rate (an overall capitalization rate) or by multiplying the income estimate by an appropriate income factor (an income multiplier). The income expectancy considered should be the anticipated future income. Generally, the current year income is used as a reflection of this future income. The rate or factor calculated represents the relationship between the income and value observed in the marketplace. The overall capitalization rate is derived by dividing the net operating income by the sale price. A factor or multiplier is derived by dividing the sale price of a property by its annual potential income or its effective gross income.

Direct capitalization is market orientated, with market evidence and property values being based on the analysis of actions of typical investors. Direct capitalization does not explicitly differentiate between the return on and return of capital because investor assumptions are not specified. It is assumed that the calculated multiplier or rate will satisfy a typical investor and that the prospects of future monetary benefits, over and above the amount originally invested, are sufficiently attractive.

Yield Capitalization

This method converts future benefits into present value by discounting each future benefit at an appropriate yield rate or by developing an overall rate that explicitly reflects the investment's income pattern, value change and yield rate. This method is both market-oriented and profit or yield-oriented, simulating typical investor assumptions with formulas that calculate the present value of expected benefits assuming specified yield requirements. Specific conclusions must be made regarding changes in net income, cash flow and property value over the holding period. This method has very limited applicability for assessment purposes and will not be further detailed in this handbook.

Preferred Method for Assessment Purposes

Direct capitalization, where capitalization rates are derived from comparable sales, is the preferred method for assessment purposes when (a) the investment opportunities by the properties being valued are similar to those provided by recently purchased income producing properties; and (b) a consistent pattern of overall rates (or multipliers) emerges from the analysis of sales of income producing properties. The net operating income of each comparable property is calculated and estimated the same way that the income of the property or properties being valued is estimated. To value the fee simple estate, it is necessary to use market rents that

the property is capable of producing. Fee simple estate sales of income producing properties are rare. To produce income, most properties are leased, and sales are therefore indicative of the value to the landlord or the leased fee estate. Therefore, a number of sales subject to leases have to be analyzed to find properties that were sold with market rents or with rent structures that can be easily adjusted for market rent equivalency. The required market “rent” type structures would include typical vacancy and operating expenses.

Gross Income Multiplier

The gross income multiplier is an income factor in the direct comparison method. Gross income multipliers must be extracted from properties with similar physical and locational characteristics that reflect similar income to expense ratios, similar risk characteristics, and similar expectations as to change in income and value over a typical investment holding period.

The sale price can be divided by either the potential or effective gross income, but the data and measure must be used consistently throughout the analysis to produce reliable results. Also, if sales are analyzed using next year’s income expectation, the multiplier derived must be applied to next year’s income expectation for the property or properties being valued.

As the name implies, a gross income multiplier is applied to gross income. This would appear to make its use appealing because it would not need expense analysis. However, the gross income multiplier is only reliable if there is a similarity in income-to-expense ratios (total operating expenses expressed as a percentage of effective gross income) for the comparables and properties being valued. In addition to an income study, to derive the gross income to which the multiplier is applied, operating expenses also have to be examined to determine if the income-to-expense ratios are similar. If the gross income multiplier is thus properly applied, there is little saving in time and resources between its use and the more detailed and accurate overall capitalization rate.

The Steps in the Income Capitalization Approach

- Estimate gross annual potential income as though fully occupied.
- Deduct from gross potential income an allowance for typical vacancy and collection losses.
- Add other or miscellaneous income such as parking, laundry, and concessions. These items may or may not be subject to a vacancy and collection allowance depending on whether the actual income from the source is used (no allowance) or the potential 100 percent occupied income is used (make an allowance).
- Effective gross income is the gross annual potential income less vacancy and collection losses, to which is added any miscellaneous income.
- Estimate the annual operating expenses, which include all the normal expenditures that must be made to generate and protect the income stream.
- Determine the net operating income (NOI), which is the income remaining after deducting annual operating expenses from the effective gross income.
- Select the appropriate method of capitalization.
- Select the appropriate capitalization rate.
- Using the appropriate mathematical technique, convert the income into an indication of the capital value.

Using direct capitalization and an overall capitalization rate (OACR) the formula to derive an indication of capital value is:

$$\text{Value} = \text{NOI divided by OACR}$$

Income and Expense Estimates

Gross income estimates are made to forecast the most probable future income for the next year or subsequent years following the valuation date. This is the income to be received by the property owner or landlord.

Rent

Rent is the sum of money payable under a contract by the tenant to the landlord in return for the tenant's right to have exclusive possession of the premises for the term of the lease. Possession is one of the bundle of rights of the fee simple estate. When the fee simple estate loses the right of possession for a specified period, the owner's interest becomes the leased fee estate.

Gross Rent and Net Rent

Lease terms range between net and gross, although many are not completely one or the other. With a **net lease** the tenant pays all real estate taxes, insurance, and operating expenses such as repairs and maintenance, utilities, and janitorial services. However, the landlord will often pay the operating expenses and then recover them from the tenant in accordance with the terms and conditions of the leases.

In a **gross lease** the landlord pays and is responsible for administering all operating expenses. Some leases have clauses that raise the rent under specific conditions or which limit the landlord's responsibility for certain expenses to a negotiated amount (the tenant would pay any excess).

Regardless of the nature of the lease, the net income to the landlord is capitalized to an indication of market value. Net income is determined by subtracting from gross income, all operating expenses, determining amounts attributable to non assessable items, but does not allow debt service, income tax, and owner's business expenses. With a net lease, it is the net rent to the landlord that is capitalized. Where leases are gross or semi-gross, applicable operating expenses must be deducted from the gross rent to determine the net rent to the landlord.

When requesting income and expense information from property owners, it is critical to determine actual operating expenses paid by the landlord and the operating cost recoveries from the tenant. If cost recoveries exceed actual operating expenses, the recovery mechanism provides the landlord with an additional source of income.

Even with net leases, the landlord still has some operating expenses that may not be recoverable from the tenant. **Non-recoverable** expenses arise solely due to the terms and conditions of the lease. Typically these could include some management expenses, legal and audit fees, structural repairs, advertising and promotion, and leasing commissions. **Unrecovered** expenses are those expenses that must be met by the owner. They may be recoverable, as in the case of vacant space, or non-recoverable under the typical lease arrangements. This operating expense shortfall to the owner is therefore a deduction from the amount of income received from the property.

Market Rent and Contract Rent

When a market value estimate of the fee simple estate is the objective of the income capitalization approach, market rent must be used. In fee simple valuations, all rentable space is assumed to be leased at market rent. **Market rent** (sometimes referred to as economic rent) is the rental income that a property would most probably command in the open market. Market rent is an estimate derived from the analysis of current rents paid and asked for comparable space as of the valuation date.

When a market value for non-assessment purposes of the leased fee estate (landlord or lessor) is required, contract rents are used (plus the residual value of the potential market rents at the end of a contracted lease term). **Contract rent** is that rent agreed upon by the landlord and tenant; it is the actual rental income specified in a lease.

The value of the fee simple estate and leased fee estate are similar if contract rents approximate market rents. The leasehold estate (lessee's interest) only has value if the market rents for comparable property exceed the contract rent, (that is, the tenant enjoys a favourable rent). The leased fee estate could have greater value than the fee simple estate if the contract rent exceeds the market rent for comparable property (that is, the landlord enjoys an above-market rent). The use of market rents in the valuation of the fee simple estate eliminates the possibility of any excess profit to either the lessor or the lessee.

A major reason for the difference between contract rents and market rents is the length of the lease term. When initially negotiated, contract rents may reflect current market rents. The longer the term of the lease and the further into the lease term, the more likely it is that market conditions will change and the greater the variation between market and contract rent (assuming that lease terms do not permit lease amounts to be renegotiated commensurate with changing market conditions).

Effective Rent

Effective rent is the base rent or minimum rent stipulated in a lease, over the specified lease term, less rent concessions. When real estate markets are oversupplied, landlords may give tenants concessions such as free rent for a specified period of time, extra tenant improvements, moving allowances, lease buyouts, and cash allowances.

Effective Tax Rate

A capitalization rate has up to three components: the rate of return of capital (discount rate), recapture rate, and where taxes form part of the gross revenues for “ad valorem assessment purposes”, an effective tax rate. If an effective tax rate is incorporated into the overall capitalization rate, the actual property taxes are not included as an operating expense.

Excess Land

The portion of a property’s land area that represents a typical land-to-building ratio, and the existing improvements, may be considered an economic unit. Excess land, with regard to an improved site, is the surplus land not needed to serve or support the existing operation. Unless there is income attributable to the surplus land (parking or on-site storage), the income capitalization approach is an indication of the value of a property that has a typical land-to-building ratio. If the excess land is marketable or has value for future expansion of the existing improvements, its market value as vacant land is added to the value indicated by the income capitalization approach. The amount of excess land can be determined either by analyzing local land-use bylaws and comparing the development allowed to the development that has taken place or by analyzing the land-to-building ratio of similar properties. Adjustments can be made for properties that fall outside of an acceptable range.

Cost Approach

The cost approach is based on comparing the cost to develop a property with the value of the existing property or a similarly developed property. Purchasers may compare the value of existing structures with the selling prices and net income obtained for similar buildings to the cost to create new buildings with optimal physical and functional utility. A purchaser may also estimate the cost to bring an existing structure up to desired levels of physical and functional utility.

When to Apply the Cost Approach

The cost approach is based on the principle of substitution, that is, a person would pay no more for a property than the cost of replacing it with another property of equal utility. Because the cost approach begins with a measure of the cost of replacement and not market evidence such as rents or sales, it requires an appropriate estimate of depreciation to produce market values. There are a number of ways to estimate depreciation. The best method relates cost values to market sales evidence. Once the appropriate depreciation has been established, the cost approach is a useful tool for estimating market value.

The cost approach is most relevant when the amount of depreciation can be defined by the marketplace; the land value is well supported; the improvements are new or only suffer minor accrued depreciation; and the present use is representative of the highest and best use of the land as though vacant.

The cost approach should be used in those instances where other approaches are not viable. This approach is applicable when a lack of market activity limits the usefulness of the sales comparison approach and there is no income evidence available to support the income approach. This would apply to special-purpose properties and other properties that are not frequently exchanged in the marketplace. Purchasers may measure the price that they are willing to pay for an existing building against the cost to build a replacement, or the cost to purchase an existing structure and make necessary modifications.

Outside of major urban areas, the cost approach is used on the grounds that there are no suitable comparisons in the area. In the absence of local sales, it is often possible to use sales from other areas that have some element of similarity to the subject's location, despite the geographical distance. Adjustments can be made for any difference in market conditions.

How to Apply the Cost Approach

The basic steps for the cost approach are:

1. Collect improvement data (see data collection section).
2. Estimate replacement cost — replacement cost is the cost as of a particular date. A building classification system is key to estimating cost in mass appraisal because cost is influenced by differing characteristics such as:
 - Design type.
 - Construction type.
 - Quality class.
 - Floor area.
 - Building shape.

Cost manuals are the basis of a cost model in a form that is familiar and easy to use. There are commercially available cost manuals that have a national scope, use local cost modifiers, and are updated frequently. When third-party manuals are not adequate, local cost manuals can be developed and maintained. Cost manuals can be converted to cost models and then used for mass appraisal purposes.

3. Determine depreciation.

Depreciation, which is **a loss of value from any cause**, is the difference between replacement cost new and market value.

Depreciation is the reduced value of a property compared to a hypothetical new and similar property that has had no loss of value. Three generally recognized sources of depreciation are:

- a. Physical deterioration** — caused by deterioration in the physical components of the structure. While virtually all structures deteriorate with age, good maintenance can help to slow the deterioration.
- b. Functional obsolescence (curable/incurable)** — caused by an inability of an improvement to perform its function efficiently. Functional obsolescence may be attributable to deficiencies, defects, inefficiencies, or super-adequacies of a property.
- c. Economic obsolescence** — adverse factors outside of the property that decrease the desirability and are usually beyond the owner's control. For example, industrial use in a residential neighbourhood.

2. *Data and Data Management*

2.1 Data

A prerequisite to mass property appraisal is to collect the necessary data. To get accurate and equitable assessments, the information required to value all properties must be up to date, reliable, and in a usable format. Continuous sales verification and data collection programs are necessary. Research other than site inspections may be required. This might include use of plans, multiple listing descriptions, or property description mailouts.

2.1.1 Analyze Available Resources

The first step in estimating market value is administrative in nature. A jurisdiction must analyze what approaches and techniques are going to be used in the analysis stage. The jurisdiction must then determine what available resources it has including staffing levels, computer technologies, ease of obtaining the necessary data, and ease of using available data. This will entail a review of current data to determine how complete it may be.

2.1.2 Select and Collect Appropriate Data

Various forms of data are needed to estimate market value. The data needed depends on the types of property being valued, the chosen approaches to value, and the variables believed to affect value. To get accurate and equitable assessments, data must be up to date, reliable, and in a usable format.

Coding must be consistent for both the sample and the general population. This is especially important for those variables that require judgment. For example, if it is estimated that a “better quality” improvement adds a specific amount of value, based on available market evidence, a property inconsistently or incorrectly coded as "better quality" will receive an inappropriate adjustment amount.

General Data

General data includes information on the four forces that affect property value: social, economic, governmental, and physical. It is the interaction of these four forces that creates trends and ultimately influences property value.

General data consists of:

- International, national, regional and local economic trends.
- Demographics.
- Government regulations and social attitudes.
- Purchasing power.
- Price levels.
- Building fluctuations.
- Building costs.
- Taxes.
- Financing.

Specific Data

Property specific data provides the basis for:

- Allocating value to the property.
- Analyzing comparable sales.
- Determining highest and best use.
- Determining utility, marketability, and market value.
- Making comparisons with competing properties.

A typical property description might include data on the physical property (site and improvement), income and expenses, sales, and general property descriptions (such as address, etc.).

Physical Property Data

Site:

- Dimensions, shape, topography.
- Soil and subsoil conditions, drainage.
- Utilities and services.
- Access.
- Off-site improvement such as streets, curbs, sidewalks.
- On-site improvements such as landscaping, driveway, septic system.
- View.
- Proximity of hazards or nuisances.
- Land-use designation (whether current use is a conforming use), restrictions, easements, covenants, encroachments.
- Conformity with neighbourhood.
- Other locational factors (for example, exposure, traffic counts).

Improvement:

- Dimensions and area of building, room count.
- Type of space (office, retail).
- Quality.
- Type of construction.
- Year(s) of remodeling or additions.
- Garages, decks, porches, or other structures.
- Actual and effective age.
- Condition.
- Functional utility.

Income and Expense Data:

- Rentable or gross leaseable area.
- Number and type of rental units.
- Per-unit rents.
- Vacancy rates.
- Collection losses.
- Miscellaneous income.

- Allowable expenses.
- Tenant inducements.
- Actual income and expense information for the most current financial period.

Sales Data:

- Unadjusted sale price.
- Interests sold.
- Date of sale.
- Names of buyers and sellers.
- Purpose for which property is being used.
- Whether or not the sale is an arm's-length, open market sale.
- Property rights and warranties made by the seller.
- Area or neighbourhood.
- Property characteristics as of the date of sale (may differ from characteristics on current roll).

The number of sales available for a group of properties will determine the number of years of sales information needed for analysis. It is most desirable to use recent sales (sales in the previous year) but lack of sales information may necessitate using previous years' sales. It may not be necessary to adjust all sales to the valuation date unless analysis reveals a pronounced trend in sales prices over time.

Property Description Data

- Parcel identifier
- Property address
- Legal description, etc.

Schedule 3 of the Standards of Assessment Regulation (AR 365/94) requires that the following information be recorded:

- For each parcel of land - legal description, parcel size, land use bylaw code, and actual use.
- For each improvement - quality rating, classification, size, effective year built, and condition.
- For a sale - certificate of title, sale price, adjustments, and sale date.

2.1.3 Sources for Data

Sources for ongoing data collection include:

- Property sales records from Land Titles.
- Demolition and building permits.
- Subdivision plans - to locate new parcels that require inspection.
- Aerial photographs - to confirm existing information and identify changes.
- Owners.
- Tenants.
- National publications.
- Assessment reviews and appeals.
- Published studies.
- Municipal Planning Commission.
- Newspaper advertisements.
- Buyers and sellers.
- Third-party sources such as real estate agents, multiple listing services, title companies, fee appraisers, financial institutions, university research centres, leasing agents, and property managers.

Effective ways to gather information:

- Mail questionnaires or surveys - should be concise and clear and accompanied by a covering letter explaining purpose, importance, and authority for gathering information.
- Personal interviews - should use a standard form to ensure essential data is collected in a consistent manner.
- Telephone interviews - a good supplementary source of information.
- Assessment appeals - information is produced on appeals that should be retained as a supplementary source of information.

2.2 Data Integrity/Data Verification

2.2.1 Property Data Verification

A regular reinspection cycle should be in place to keep physical data current. Reinspection may include interior or drive-by inspections, surveys, and mail-outs. Results of ratio studies may identify areas requiring immediate reinspection. The reinspection cycle can be integrated into the data collection process.

2.2.2 Sales Verification

All sale properties should be reviewed for accuracy of data. This should include a field check if possible. At a minimum, outliers (those properties where assessment-to-sales-price ratios are above or below a predetermined acceptable range) should be field checked. Sales must be screened to identify those sales that require adjustment or may not be indicative of market value. Examples of this may include:

- Non-typical financing.
- Significant personal property.
- Multiple-parcel sales.
- Non-arm's-length sales.
- Sales involving courts, government agencies, public utilities, financial institutions, relatives, corporate affiliates, or estates.
- Partial-interest sales.
- Agreements for sale involving installments, with title transfer when final payment is made (adjustments may be required to reflect the date of sale, not the date of title transfer).
- Trades in which items of real or personal property are a portion of the price (adjustments may be required if the value of the items traded are included in the total purchase price). If full price cannot be reliably established, exclude the sale.

Sales verification may also elicit additional information about the market.

Note: It is desirable to develop codes to indicate non-usable sales. As some sales may be usable for appraisal purposes but not for ratio studies used in equalization, it is desirable that forms or computer systems provide for recording multiple reasons.

2.2.3 Income and Expense Verification

The income capitalization approach requires annual data on rental income and expenses. When current income and expense data are not available for some income-producing properties, estimates based on analysis of data from comparable properties can be used. Published data from industry sources can be used to support estimates developed from income and expense models.

2.3 Data Management

To be inserted at a later date.

3.0 Valuation

3.1 Mass Appraisal

The appraisal of property can be expressed in mathematical terms by various valuation formulas. The objective of a mass appraisal system is to establish the appropriate formula or formulas that can be applied to determine the values of a group or “mass” of properties.

The formulas are estimated by analyzing the factors or variables that contribute to value against the actual market values demonstrated in property sales. The variables applied in a formula relate to the method of valuation (for example, rent per square foot – income approach).

The better a formula is at predicting the actual sales values, the higher the degree of confidence in the results. The more representative the sample of property sales is in reflecting the nature and character of a group of properties the more widely applicable the formula.

3.1.1 Inferences

To estimate property values for groups of properties using any of the three approaches to value, certain inferences must be made. This is because typically in a given year only 5 to 10 percent of the properties sell (data for the sales comparison approach), far less than 100 percent of the income-producing properties carry current market leases (data for the income capitalization approach), and only a small percentage of properties are built (data for the cost approach). Therefore, current market information is available for only a sample of properties. This information is statistically analyzed to determine what characteristics contribute to value. The results from this analysis are then applied to the general population. Thus, statistical analysis of the sample is used to infer values for the population of properties.

To ensure that the correct inferences are made, the sample should be representative of the general population being valued. If it is found that the sales, income, or cost data are not representative of the population, adjustments must be made to account for the difference. An example of this would be having no sales on a major traffic corridor when using the sales comparison approach.

Appraisers may have to go to a larger sample to determine the possible change in value due to traffic. General descriptive statistics and some simple graphs and plots can be run on property characteristics, for both the sample and general population, to determine how representative the sample might be. Sales can be plotted on maps to evaluate whether or not they are evenly distributed.

Correct appraisal methods and sound judgment must accompany statistical analysis. The value estimates produced must be defensible and provide an equitable basis for taxation.

3.2 Model or Formula Specification and Calibration

To analyze and apply results from available market information, valuation formulas, or models, are built. Valuation models are formulas developed to emulate how the market works. Models can be built for any one of the three approaches to value and should represent the forces of supply and demand in the marketplace. Model building also allows for standard methods to be employed as required by the Standards of Assessment Regulation (AR 365/94).

The two steps to building a model are:

- **Model specification** –designing a model or formula by selecting the appropriate variables (data elements) that are thought to contribute value to a specific type of property. Examples of variables include the size, type, or quality of the improvement or space, the location of the property, and specific attributes such as fireplaces or garages in residential properties.

Model specification also includes defining the variable's relationship to value. For example, it must be determined if a variable shows a linear relationship to value (adds a set amount of value per unit) or is non-linear as seen in the case of diminishing returns where the value per unit of the variable changes with each unit. The relationship of the variables to value and the nature of the market in which the property type sells help to determine the type of model or equation. Models can be additive in nature, or multiplicative, or a hybrid of both.

- **Model calibration** – estimating the amount each variable adds to overall property value. This amount is the "coefficient." The adjustment amount or coefficient is determined by analyzing available market data. For example, market analysis might determine that the living area has a value of \$62/square foot. The figure \$62 is the "coefficient."

3.3 Preliminary Analysis

3.3.1 Stratify Properties into Appropriate Groups

Once the data is collected to proceed in mass appraisal valuation, the properties must be stratified or sorted into groups of similar properties. The reason for stratification in appraisal is to facilitate analysis of market evidence and market values by grouping properties into natural markets and sub-markets.

There are generally two ways to group or stratify properties for valuation purposes. The first is by location or geography, the second is by property characteristics.

Geographic Stratification

Location can be a very important factor in market analysis. One way to account for location is to stratify or group properties into geographic areas. Geographic stratification is particularly appropriate when property types and styles are similar within clearly defined boundaries. This is often a good method of grouping residential properties. Where possible, geographic stratification should follow physical boundaries. Strata should include enough properties to provide adequate sales to analyze the types of properties found in the area.

Note: Some degree of heterogeneity is acceptable in each strata. It is not necessary for properties in a geographic strata to have homogeneous site and improvement characteristics.

Knowledge of economic, social, governmental, and environmental factors that directly affect property values in an area can help in the stratification process. In the mass appraisal process this information can be used to compare and combine neighbourhoods as well as to rank each neighbourhood. Ranking can sometimes be used to develop adjustments in the valuation process.

Stratification by Property Types

Grouping properties by type is used when boundaries are not clearly defined and/or properties differ more within the boundary than between the boundaries. This method is often used for commercial properties such as offices and retail. Properties can be grouped or stratified by:

- Property characteristics including property type - office buildings, apartments, duplexes, etc.
- Structure type - two storeys, bungalows, etc.

- Sale price per square meter/foot.
- Construction type - wood frame, concrete block.

It must be noted that the stratification process is ongoing. When markets shift, strata must be reviewed. As well, stratifications may need to be re-evaluated during the analysis and valuation stage.

3.3.2 Exploratory Data Analysis

To be inserted at a later date.

3.4 Valuation

3.4.1 Introduction

The most appropriate approach to value is determined by the availability of market evidence (sales and rents) and the property type. Certain approaches tend to produce better results for a given type of property. The sales comparison approach lends itself well to property types that are bought and sold regularly, such as single-family dwellings, residential condominiums and vacant land. The income capitalization approach is more suitable for commercial/industrial, multi-family, and other properties where there may not be sufficient sales for direct comparison purposes and the anticipated net income streams are a major factor in the decision to purchase the property. There are inherent weaknesses in the cost approach because it reflects the supply side of the market and is not necessarily an indicator of market behaviour. The cost approach may be applicable to limited-market and special-purpose properties where there is an absence of market data for comparison purposes.

3.4.2 Select the Appropriate Model Form

The model form or the type of equation used to estimate value is based on the type of properties being valued. Generally, residential models tend to be additive in nature. This means that each variable used is independent of all other variables, for example adding the value of a garage has no impact on the value of the rest of the variables in the model such as size of the improvement or location. Additive models are the most understandable and easiest to explain. Income-producing properties are generally multiplicative and nonlinear in form.

Considerations by Property Types

To develop models for specific types of property, refer to the valuation guides that follow this section of the handbook. These guides outline the preferred approach to value for specific property types in Alberta.

3.4.3 Analyze the Data/Calibrate the Model

Once the approach to value has been chosen, the data must be analyzed and the model calibrated. Analysis has been discussed under the three approaches to value. However, for mass appraisal there are also several techniques that can aid in the analysis and calibration. Mass appraisal indicates that typical adjustments are made to a group of properties and that a spreadsheet can be used to review the groups of data and determine typical values, rents, costs, etc. However, current technology and statistical tools enhance these techniques and enable the assessor to quickly and efficiently process a great deal of information. Some of these techniques are listed below.

Multiple Regression Analysis (MRA)

MRA is a statistical technique and an analytical tool used to analyze data. By analyzing a sufficient number of sales it is possible to establish the relationship between known data and market value. Unknown data is generally market value whereas known data has building areas or rents and other property characteristics. MRA can produce accurate and consistent results given adequate sales, rents, costs, good data, and proper stratification of the properties into market areas or property groups.

If, for example, MRA is used for the sales comparison approach and all the sales are plotted on a graph, multiple regression finds a best-fit line. The equation of the best-fit line (the calibrated model) is used to calculate values of all properties in the market area being analyzed.

The validity and accuracy of an MRA model depends on:

- Complete and accurate data including:
 - A well-designed system for data collection, storage, retrieval, and maintenance.
 - A consistent approach to data collection and classification.
 - Effective edit checks.
 - Valid sale prices and sale information, rent or income information, or costs.

- Selecting the correct model form:
 - Selecting the appropriate type or form of model depends on how the variables interact with each other. Value can be additive in nature when one variable is simply added to another. This method assumes that the variables are independent of each other and do not interact. An example of this is generally found in residential properties where value can be explained by adding components together such as (value of land) + (value x size of improvement) + (value x number of fireplaces) + (value x size of garages) + (value x location). All components are added together. Adding components to the property generally adds value. A multiplicative model is used when the variables interact with each other. This is often the case with income-producing property. A hybrid model can be used when there is a combined effect.
 - The relationship of how the variables interact must also be examined. If the value of a variable remains constant over the entire range of that variable, the relationship is considered linear. For example, the relationship would be linear if a variable added the same dollars per square meter to every square meter of a house within a given range of house sizes. If this is not the case, the model or variable needs to take a different form to accurately reflect the market. This could also be dealt with by re-stratifying the properties used in the model to reflect a narrower range of attributes.
- Other factors including:
 - Uncorrelated independent variables.
 - The independent variable used in the model should not be highly correlated with any other variables (moderate correlation is not a problem).
 - Representativeness.
 - The sales used in the regression analysis must represent the property group or stratification because once developed, the equation or model will be applied to all properties sold and not sold.

Adaptive Estimation Procedure (AEP or feedback)

Adaptive estimating is another analysis tool using sales to estimate the market value of properties. In this technique, the specified equation is continually adjusted as data from individual sales is processed, analyzed, and reprocessed.

AEP uses benchmarks for qualitative variables. A value is assigned to each variable to start off the process.

If properly specified, the AEP can give equal results to the MRA for the sales comparison approach.

Location Value Response Surface Analysis (LVRSA)

“Location affects value.” The LVRSA technique was developed to account for locational adjustments in the property value estimate. This technique allows for a smooth adjustment for locational factors used in conjunction with MRA, AEP, or other analysis tools.

The technique's primary purpose is to use only one model to deal with location (so "fence line" problems are minimized).

First, the model estimates values without location variables, and then ratios are calculated. Those ratios are plotted on a geographic grid and “value influence centres” (VICs), both positive and negative, are created by measuring the distances from the influence centres to the individual parcels. The model is rerun including the distance variables. Ratios are then re-computed and plotted. This is repeated until the ratios are acceptable.

The advantages of LVRSA are that fewer models are developed, thereby maximizing sample size and stability. Geographical and locational influence adjustments are made smoothly so as to minimize any equity problems (due to location).

3.4.4 Verifying the Models

The models need to be verified throughout the process, before the values are calculated and after values have been estimated. The following is considered during evaluation:

- Explainability and good appraisal judgment

No matter how statistically sound the model is, the values for each variable must be reasonable, understandable, and explainable. That means:

- The model should be kept as simple as possible.
- All variables used in any model must contribute to or deduct from the value of a property.
- Values should be within reasonable limits as determined in the marketplace.

- Good appraisal judgment and theory is paramount

Understanding statistical measures as they relate to property value is necessary. That means:

- Goodness-of-fit statistics allow the accuracy of the model to be checked before values are derived.
- Ratio studies allow checks on equity (both horizontal and vertical).

- Pilot studies

These can be used when a new technique or approach is tried. This allows a check for problems on a sample of properties before models are built for the whole region. This also helps to ensure that all supporting processes are in place and in working order.

- Office and field reviews

If all other indicators are good, the outliers (those properties falling outside the acceptable statistical range) should be checked and explained if possible. Field checks should be done on final values to ensure reasonability. This may go beyond overall good model results.

- Hold-out samples and control models

These can be used to check the consistency of the values and identify some of the outliers.

- Stability over time

Once the model has been used to calculate values on all the properties, new values should remain reasonably stable. Those properties where values change by a substantial amount should be reviewed.

3.4.5 Market Value Estimate - Choosing the Best Approach

Standards suggest that the preferred practice when determining values is to develop multiple models for each type of property. This may be the ideal; however, multiple models are not always practical due to time constraints and lack of data. In the ideal situation, if multiple models are built using different approaches to value, the final step is to choose the most defensible estimate. This may depend on the quantity and quality of available data:

- The sales comparison approach requires a sufficient sample of sales to provide a good indication of market values. The sample also has to represent the population being valued.
- The income capitalization approach requires reliable income and expense data, as well as objective evidence of the relationship between income and present value.
- The cost approach requires estimates of land values, cost data, and depreciation. With its limited relationship to market value, this approach should only be used given certain conditions.

Certain approaches tend to produce better results for certain types of property. This should also be weighed in choosing the final value.

Mass appraisal involves the systematic analysis of many parcels and the use of averages, trends, and benchmarks. The reliability of any one of the approaches depends on the quality and consistency of the data used in developing the applicable valuation equation or table.

3.4.6 Apply Model Results to the Population

Regardless of the valuation approach used to arrive at market value, tables or formulas are generally used in a computerized mass appraisal system to calculate assessments for all properties. The table can help assessors and taxpayers understand a mass appraisal model.

3.5 Validation

3.5.1 Quality Assurance

Quality in modern organizations includes the degrees to which the features and characteristics of an organization meet the standards and expectations of its clients. Quality assurance is all of the planned and formalized activities intended to provide confidence that the assessment function satisfies required quality levels. Quality control includes the activities intended to create and monitor specific quality characteristics. Assessors have a number of options available to develop a comprehensive quality assurance program and quality control.

Administrative functions should include:

- A comprehensive system of short and long-range planning.
- An organizational commitment to continuous improvement.
- A comprehensive ratio study program.

Subscribing to the professional development programs of organizations such as the International Association of Assessing Officers, the Appraisal Institute of Canada, or the Alberta Assessors' Association can lead to well-trained staff using credible and consistent valuation methodologies.

Accurate valuation depends on the accuracy of data and appraisal judgment needed to adjust values in exceptional circumstances.

A comprehensive program of appraisal review in the office and in the field can yield many benefits.

As part of the validation of values, one of the most significant benefits includes the correction of errors that can occur in inventory and valuation. In turn, these corrections reduce reliance on amended notices and appeals.

Ideally, discretionary quality standards adopted by the assessor will exceed the mandatory standards contained in legislation and advocated by professional associations.

3.5.2 Ratio Studies

The single most valuable technique used to measure assessment quality by assessment jurisdictions throughout North America is an assessment-ratio study. An assessment-ratio study examines the relationship between assessed values and sale prices. This process establishes the level of assessment and assessment uniformity.

Assessment Uniformity

Assessment uniformity refers to how closely properties are assessed at a particular level of assessment. The prime measure of assessment quality is the coefficient of dispersion which measures how much, on average, property assessments deviate from a specified level of assessment.

Given the following legislated and professional standards, assessment departments also may impose on themselves additional compliance standards such that any assessed values that lie outside the above standards will be subject to additional examination.

If individual assessment details are shown to be incorrect or the assessment is inequitable in comparison to similar properties, the values should be adjusted accordingly.

Horizontal & Vertical Equity

If equity in assessed values is achieved, the assessed value for every property has a similar relationship to market value. Inequities result when this relationship does not exist.

Horizontal inequity occurs when a group of properties is assessed at a different level of market value when compared to a similar group. Groups can be defined by location, property type, size, age, etc. For example, horizontal inequity would occur if residential properties in the inner-city were assessed at 80 percent of market value, and suburban residential properties at 100 percent.

Vertical inequity occurs when one group of properties is assessed at a different level than another group. For example, vertical inequity would occur if upscale residential properties were assessed at 85 percent of market value, and low income housing was assessed at 100 percent. This is an example of assessment regressivity. Regressivity is an appraisal bias such that higher value properties are appraised at a lower level than low value properties. If the reverse were true, it would show assessment progressivity or an appraisal bias such that higher value properties are appraised at a higher level than low value properties. Neither situation would be desirable. A simple measure of vertical equity is the price-related differential (PRD). The PRD is defined as the mean (average) assessment-to-sales ratio divided by the weighted mean. Refer to the IAAO standard on ratio studies for additional information on statistical measures relating to horizontal and vertical equity.

3.5.5 Standards

Legislated

Alberta's Standards of Assessment Regulation (AR 365/94) defines assessment quality standards for all Alberta municipalities. The standards are shown in the following table:

Property Type	Median Assessment Ratio	Coefficient of Dispersion
Residential	.90 to 1.10	0 to 15.0
Income Properties	.90 to 1.10	0 to 20.0
Vacant Properties	.90 to 1.10	0 to 20.0

The median assessment ratio for any property type should be within 5 percent of the overall assessment level of the jurisdiction.

Industry

Established standards provide the criteria for the way that mass appraisal assessments should be prepared. Industry guidelines are established by:

- International Association of Assessing Officers (IAAO), founded in 1934 to provide leadership in accurate property valuation, property tax administration, and property tax policy throughout the world.
- Uniform Standards of Professional Appraisal Practice (USPAP), developed in the 1980s by the Appraisal Foundation, to provide professional standards against which appraisers could be measured by report users and the public.

Other organizations that provide guidance include:

- Appraisal Institute of Canada, Institute of Property Taxation, and the Appraisal Institute (US).
 - The Appraisal Institute of Canada provides extensive guidance on the appraisal of all property. The Institute's professional development and recertification programs are among the most highly-recognized appraiser programs in Canada.
 - The IAAO suggests the following guidelines for assessment uniformity:

Property Type	Median Assessment Ratio	Coefficient of Dispersion
Single family residential		
Newer, homogeneous areas	90% to 110%	10.0 or less
Older, heterogeneous areas	90% to 110%	15.0 or less
Income properties		
Larger, urban jurisdictions	90% to 110%	15.0 or less
Smaller, rural jurisdictions	90% to 110%	20.0 or less
Vacant Land	90% to 110%	20.0 or less

Each major strata should be appraised within 5 percent of the overall level of appraisal for the jurisdiction.

While the relevant IAAO and USPAP standards are outlined in this section, every assessor's tool kit should include a complete copy of these standards.

In addition, every assessment office library should contain at least one copy of the IAAO's comprehensive property tax textbook, "Property Appraisal and Assessment Administration" (PAAA). The IAAO offers comprehensive training on all aspects of property tax assessment.

4.0 Assessment Administration, Appeal, and Taxation

4.1 Assessment Administration

The core business of every assessment jurisdiction or assessment service provider is to value all real property and businesses and/or machinery and equipment within the boundaries of a municipality to ensure that a fair and equitable assessment base is established for the benefit of all property owners.

For the assessor to achieve the highest degree of success in fulfilling his or her responsibilities, it is essential that he or she be supported by a strong and proactive administrative structure within the urban or rural municipality, or have access to the advice of individuals who have additional expertise in handling some of the administrative matters that must be addressed to facilitate the valuation process.

It is recommended that assessors take the following steps to ensure the appropriateness of their assessments:

- Establish quality assurance processes and procedures to ensure that assessed values are of the highest quality and meet all legislated requirements.
- Research and develop the best available assessment methodologies. This includes methodologies in regard to data collection; sales and income analysis; etc. A continuous re-evaluation of existing procedures is required to ensure that the most efficient and effective methodologies and processes are used.
- Review existing legislation to proactively identify the need for amendments or new legislation to facilitate the preparation of assessments.
- Prepare and distribute reports and presentations to all of the assessment industry's clients (including taxpayers, mayors, reeves and members of council, Alberta Municipal Affairs, other assessment jurisdictions, members of tribunals, and the media) to ensure that all clients understand the importance of the assessment function to the municipality and are knowledgeable about the benefits of preparing assessments on a market value standard using modern mass appraisal techniques.
- Ensure that material submitted for equalization purposes to the Province of Alberta meets the requirements of all relevant legislation. The equalized assessment must be critically analyzed in order to ensure that the process is fair and equitable and that taxpayers in each jurisdiction share costs equitably for such programs as the school foundation.

- Set fair policies for the release and pricing of assessment information in accordance with all legislative requirements. Assessors must ensure that clients are provided with information authorized for release in a timely manner.
- Identify and prepare a program to meet the education and training needs of all assessors within the organization.
- Identify and obtain the technology, systems, and technological devices to facilitate the preparation of assessments in the most efficient and effective manner possible.
- Undertake assessment audits to ensure the integrity of all data.
- Constantly re-evaluate current policies, processes, and procedures to determine whether they are the most efficient and effective processes possible.
- Identify and secure the funding required to facilitate the preparation of the highest quality cost-effective assessments.

4.2 Valuation Date

The valuation date is July 1 in the year of assessment. However, each assessment must reflect the physical condition of the property as of December 31 of the year of assessment.

4.3 Assessment Notices and the Roll

The final steps in the assessment process are to put the final values onto the assessment roll, mail notices to the taxpayers, and respond to any appeals.

The roll return date is February 28.

In accordance with the Municipal Government Act (MGA), municipalities are required to prepare assessment notices for all assessed property, other than linear property, and send them to the assessed person(s). Notices for linear property are sent directly to the assessed person by the assessor appointed by the Minister, with a copy to the municipality.

Information required to be shown on the assessment notice and the assessment roll is outlined in the MGA.

Assessment notices are mailed annually and must be sent no later than the date tax notices are required to be sent, which is before the end of the current year. Both assessment and tax notices may be mailed together.

A municipality must publish in one issue of the newspaper or other appropriate manner a notice that assessment notices have been sent out.

If there is an error, omission, or misdescription in any of the information shown on the assessment roll or the assessment notice, the assessor may correct the assessment roll for the current year only. An amended assessment notice must be prepared and sent to the assessed person.

Similar provisions for correcting the tax roll are contained in the MGA (section 330).

4.4 Assessment Appeals

4.4.1 Complaints Against the Assessment

Section 309 of the MGA requires that the assessment notice list the date by which a complaint must be filed. The minimum 30-day period allows for stakeholders to inspect the roll to determine if the value for assessment purposes is equitable. It also allows them to ensure that the details of their assessment are correct. If an error is found in the assessment roll, an assessor may correct the roll and issue an amended notice.

Preliminary assessment notices could be released some months prior to returning the roll. The goal is to expand the length of time available for assessors and their clients to meet before finalizing the assessment roll. Canadian assessors who have implemented the release of a preliminary roll report very positive results from this initiative including increased customer satisfaction, an assessment roll with fewer errors, and a decrease in the number of complaints and appeals filed.

An amended notice does not remove the right to file a complaint with the Assessment Review Board (ARB). Ratepayers can file a complaint if they feel the assessment is incorrect. The ARB is appointed by bylaw passed by a municipal council. The ARB hears the complaint and decides if the assessment is correct as well as fair and equitable. If the ARB finds the assessment incorrect or inequitable, it has the authority to make the appropriate adjustments.

Before the hearing, all parties involved must disclose the evidence to be presented as outlined in the Evidentiary Matters Regulation (AR 121/97). This will expedite matters at the hearing as each side will be in a position to respond to one another's evidence. All evidence should be presented at the ARB level as the Municipal Government Board (MGB) must not accept any new evidence at its hearing. The MGB may refer the matter back to the ARB for further consideration should this occur.

Any person (outlined in section 470(2) of the MGA) may file an appeal of the decision rendered by the ARB to the MGB. The MGB hears the appeal and has the jurisdiction to make any decision the ARB could have made, guided by the same criteria of correctness, fairness, and equity required by the ARB.

Care should be taken when presenting information as the presiding board may have no prior knowledge of any issues associated with individual properties.

4.4.2 Defense of Assessments

Points to remember while preparing a defense of an assessment:

- Ensure that your case is built on a competent assessment. The assessor does the most important work on the case before the assessment is completed.
- Analyze the complaint. Are there reasons why the complaint might be technically invalid:
 - Was the complaint filed in time?
 - Is the complainant an assessed person or taxpayer?
 - Does the complaint relate to a matter that is appealable under the legislation?
 - Is the complaint about the tax rate?
 - Does the complaint explain why the information shown on an assessment is incorrect?
- Determine what the complainant thinks is incorrect. This will be the central focus of your response. However, you must ensure that you are prepared to provide sufficient information so that the board understands the basis upon which you prepared your assessment.
- Review and make sure that your assessment is correct. This will include checking calculations, confirming the application of the correct principles of assessment, and confirming that you followed the MGA and regulations were followed.
- Prepare evidence on the issue of fairness and equity of the assessment. The ARB and MGB are not to alter any assessment that is fair and equitable, taking into consideration assessments of similar properties in the municipality. Gather evidence that shows that the assessment is fair and equitable in relation to similar properties.
- Put yourself in the complainant's shoes. Look to see where the assessment is vulnerable. Are there any places that you had to make judgment calls? If so, are you able to support them? You may need expert evidence or witnesses to assist you, especially in areas in which you may not be an expert.
- Check the adequacy of your evidence. List all the factors upon which the complaint is relying on one side of a page. List your response on the other side of the page. Do you have the evidence to address each factor? If not, can you get such evidence?
- Be creative in putting your materials together. Consider using charts, graphs, graphics, photographs, videos, and multi-media presentations to make your case more effective. Technological wizardry does not take the place of solid evidence and assessment techniques, but can be used as an effective aid to communication.

4.4.3 Comparables

Sale and equity comparables (similar properties with sale prices that support the subject's assessed value or similar properties with similar assessed values) are traditionally used to demonstrate that the assessed value is fair and equitable with other properties. These comparisons are readily accepted by the boards.

Comparable properties are selected based on attributes thought to contribute to value in the marketplace.

Use plain language and a simple, easy-to-understand format whenever assessment values are displayed, especially when explaining assessments and how values are derived.

4.5 Taxation

Taxation is the application of a tax rate to an assessed value to arrive at the amount of taxes payable by a taxpayer.

Section 355 of the MGA mandates that the tax rate is to be calculated by dividing the amount of annual revenue required to provide services within a municipality by the total assessment of all property within that municipality. For example, if a community with a total assessment of \$50 million requires \$1 million to operate, the tax rate is calculated as follows:

$$\$1,000,000 / \$50,000,000 = .02 \text{ tax rate}$$

Municipal councils may set one or more tax rates for different classes of property.

The education portion of property taxes is levied by the provincial government on a province-wide basis. This emphasizes the need and importance for equitable assessments across Alberta.

5.0 *Legislation and Regulations*

The Municipal Government Act, 1994 c.M-26.1 (MGA) became law on January 1, 1995.

The MGA introduced market value as the standard of assessment for most properties. The provincial government's move to plain language in writing the MGA was intended to make assessment and taxation more understandable for all stakeholders.

The key MGA regulation is AR 365/94 - the Standards of Assessment Regulation which:

- Sets out the valuation standard for parcels of land, improvements, railways, linear property, and machinery and equipment.
- Requires assessments to be prepared using mass appraisal techniques.
- Permits the assessor to enter a value for land and improvements separately or to enter one total value, for each property, on the roll.
- Sets out quality standards.

5.1 The Municipal Government Act

5.1.1 Definitions

Market Value

Market value is defined in section 1(n) of the MGA as:

"... the amount that a property¹³ might be expected to realize if it is sold on the open market by a willing seller to a willing buyer."

Assessment

"Assessment", is defined in section 284(1)(c) as a value of property determined in accordance with Part 9 of the MGA and the regulations.

¹³ Property is defined in section 284(1)(r) of the MGA and in section 2.3.1B of this handbook.

Property

"Property" is defined in section 284 (1)(r) as being a parcel of land, an improvement, or a parcel of land and the improvements to it.

In the case of a condominium unit, the property is that unit's share in the common property¹⁴ and strata space.¹⁵

Note: The Standards of Assessment Regulation (AR 365/94) section 11, in part, states that an assessment must be an estimate of the value of the fee simple estate in the property. A fee simple estate is absolute ownership unencumbered by any other interest or estate. It is the full bundle of rights. Although the definition of "property" in the MGA is defined as physical land and improvements, with the fee simple estate being identified in AR 365/94, effectively what is being valued is "real property."

Parcel of Land

The MGA defines a "parcel of land", section 1(1)(v), as including:

- Any lot or block on a subdivision plan registered at Land Titles.

¹⁴ "Unit" is defined in the *Condominium Property Act*, RSA 1980 c-C22 section 1(v) as:

- (i) in the case of a building, a space that is situated within a building and described as a unit in a condominium plan by reference to floors, walls and ceilings within the building, and
- (ii) in the case other than that of a building, land that is situated within a parcel and described as a unit in a condominium plan by reference to boundaries governed by monuments placed pursuant to the provisions of the *Surveys Act* respecting subdivision surveys.

Common property comprised of a registered condominium plan is held by the owners of all the units as tenants in common in shares proportional to the unit factors for their respective units (s.4(2) of the *Condominium Property Act*.)

¹⁵ Section 87 of the *Land Titles Act* RSA 1980 c.L-5 defines strata space as "volumetric space whether it is

- (a) located below or above or below and above the surface of the land, or
- (b) occupied in whole or in part by any structure,

and that is shown as strata space on a strata space plan."

- More than one lot or block if a building affixed to the land is on more than one lot or block.
- A quarter section under the *Surveys Act*.

The MGA also defines a parcel of land in section 290.1(1) as:

- A bare land condominium unit.

Improvement

An "improvement" is defined in section 284(1)(j) as including:

- A structure.
- Any thing attached or secured to a structure, that would be transferred without special mention by a transfer or sale of the structure.
- A designated manufactured home.
- Machinery and equipment.

Section 291(1) states that “an assessment must be prepared for an improvement whether or not it is complete or capable of being used for its intended purpose.”

Section 291(2) states that no assessment is to be prepared for:

- Linear property that is under construction but not completed on or before October 31, unless it is capable of being used for the transmission of gas, oil, or electricity.
- New improvements that are intended to be used for, or in connection with, the manufacturing or processing operation and are not completed on or before December 31.
- New improvements that are intended to be used for the storage of materials manufactured or processed by the improvements referenced above if the improvements are not completed or in operation by December 31.

Assessment Classes

Once the assessment of property is prepared, the assessor must assign an assessment class to the property (section 297):

- Class 1 - residential
- Class 2 - non-residential
- Class 3 - farm land

- Class 4 - machinery and equipment

These terms are defined in section 297(4) of the MGA.

A council may pass a bylaw which further divides:

- Class 1 into sub-classes on any basis it considers appropriate.
- Class 2 into two sub-classes — vacant non-residential and improved non-residential (section 297(2)).

The assessor may assign more than one assessment class or sub-class to a property but must provide a breakdown showing each class or sub-class assigned and the portion of the assessment attributable to each (section 297(3)).

5.1.2 Preparation Of Assessments

Duties and Obligations Of Assessors

In preparing the assessment, the assessor must, in a fair and equitable manner, apply the valuation standards and follow the procedures set out in the regulations (section 293).

If there are no procedures set out in the regulations, the assessor must take into consideration assessments of similar property in the same municipality (section 293(2)).

- Request for Information

The assessor, after giving reasonable notice, may at any reasonable time, for the purpose of preparing an assessment of the property or determining if the property is to be assessed, enter and inspect the property, request relevant information or documentation, and make copies of material provided (section 294). Under section 294(4) of the MGA, no person may make a complaint about an assessment if he or she has failed to provide the information requested under section 294(1).

On the request of the assessor, a person is obliged to provide the information requested (section 295). If necessary, the assessor may obtain an order of the Court of Queen's Bench to gain access to a property or to obtain information required (section 296). Under section 295(4) of the MGA, a person may lose his or her right of appeal for not providing the requested information.

An assessor may be required to produce identification on request (section 294(2)).

- Right to Information

An assessed person may ask the municipality¹⁶ to see or receive sufficient information to show how the assessor prepared the assessment of his or her property (section 299) or a summary of the assessment of any assessed property in the municipality (section 300). The municipality must comply with these requests, provided the necessary confidentiality is maintained (sections 300(2) and 301).

Assessment Roll

Section 302 of the MGA directs that the assessment roll must be prepared annually, no later than February 28.

Section 303 of the MGA outlines what the assessment roll must show.

Any person may inspect the assessment roll and tax roll during regular business hours after paying fees set by the council (section 307).

Assessment Notices

In accordance with the MGA, municipalities are required to prepare assessment notices for all assessed property, other than linear property, and send them to the assessed person(s). Notices for linear property are sent directly to the assessed person by the assessor appointed by the Minister, with a copy to the municipality (section 308(1)(2)).

Information required to be shown on the assessment notice includes all the information shown on the assessment roll (section 303); the date the notice was sent, and the date by which a complaint must be made, together with the address to which the complaint must be sent. The grounds for complaint are listed under section 460(1)(5) of the MGA.

Assessment notices are mailed annually and must be sent no later than the date tax notices are required to be sent, which is before the end of the current year. Both assessment and tax notices may be mailed together (section 308(3)).

A municipality must publish in one issue of the newspaper or other appropriate manner, a notice that assessment notices have been sent out (section 311(1)).

Errors or Omissions

If there is an error, omission, or misdescription in any of the information shown on the assessment roll or the assessment notice, the assessor may correct the assessment roll for

¹⁶ Each Municipality may establish the procedures for viewing the assessment.

the current year only. An amended assessment notice must be prepared and sent to the assessed person (sections 305 and 312).

Similar provisions for correcting the tax roll are contained in the MGA (section 330).

5.1.3 Preparation of Supplementary Assessments

Sections 313 to 316 of the MGA deal with the preparation of supplementary assessments.

Supplementary assessments are prepared in the current year for improvements if they:

- Have been completed in the year in which they are to be taxed.
- Have been occupied during all or any part of the year in which they are to be taxed.
- Have been moved into the municipality and not taxed by another municipality.

A supplementary assessment roll indicates the number of months that the improvements were completed, occupied, or moved into a municipality and the amount of change in the value.

A supplementary bylaw must be passed by the council of those municipalities that wish to prepare supplementary assessments, and there must be a supplementary tax bylaw prepared (section 369).

5.1.4 Equalized Assessments

Sections 317 to 321 of the MGA deal with equalized assessments. The equalized assessment process adjusts the value of all assessable property in the province to a common basis for the purpose of cost and grant sharing programs. Equalized assessments treat a municipality as one ratepayer within the province to ensure a common basis for the purpose of grant and cost sharing programs.

5.1.5 Linear Property

Linear property assessments are prepared by an assessor designated by the Minister of Municipal Affairs. The assessment is based on an annual report provided by the operator of the linear property to the Minister by December 31. The report shows the specifications and characteristics of the linear property on October 31 of the prior year (section 292).

5.1.6 General Powers of Minister Relating to Assessments and Equalized Assessments

The MGA provides the Minister with the power to make regulations relating to procedures for preparing assessments and establishing and prescribing valuation standards. Assessors are required to meet these standards in the preparation of assessments.

The Minister has the power to cause assessments in a municipality to be prepared (section 323) if it appears that the municipality is unable to prepare assessments. The municipality would then be responsible for the costs to prepare the assessments.

The Minister may appoint one or more persons to inspect any assessment prepared under Part 9 of the MGA (section 571). This may be carried out on the Minister's initiative or by request of the municipality.

The Minister also has the power to quash assessments after an inspection of the roll and direct that a new assessment be prepared if assessments have not been prepared in accordance with Part 9 (Assessment of Property) and the regulations. The Minister may also quash assessments if the assessments are not fair and equitable or do not meet standards provided by the regulations.

5.1.7 Non-Assessable Property (section 298 of the MGA)

Non-assessable properties include:

- Publicly owned infrastructure.
- Equivalent privately owned infrastructure.
- Most machinery and equipment.
- Minerals.
- Growing crops.

These properties are not eligible for grant-in-place payments.

5.1.8 Taxation Exemptions

A property will be statutorily exempt from property taxation if the use falls within sections 361, 362, and/or 363 of Part 10 of the MGA and the attendant regulations.

Any property exempted before the enactment of the MGA (section 351) remains exempt until council passes a bylaw to make it taxable. It will remain exempt for a period of one year after this bylaw is passed.

If property does not fall within the confines of a statutory exemption, council has the authority to pass a bylaw to exempt properties held by non-profit organizations. It may exempt all or part of the property taxes.

5.1.9 Assessment Review Boards/Municipal Government Boards

Part 11 of the MGA provides taxpayers with the right to lodge a complaint to the Assessment Review Board (ARB). The complaint must be in writing and must relate to any of the information shown on the assessment or tax notice. The complainant must explain why the information shown is incorrect.

The ARB must hear and make a decision on these complaints within 150 days after sending out the assessment notice.

Section 470(2) outlines who may appeal the decision of the ARB to the Municipal Government Board (MGB).

The Evidentiary Matters Regulation (AR 121/97) outlines disclosure of evidence to be presented at the ARB. This permits the complainant and the assessor sufficient time to respond to each other's submission. The MGB must not hear any new evidence at its hearing and may refer the matter back to the ARB for further consideration.

5.2 Applicable Regulations

5.2.1 Standards Of Assessment Regulation (AR 365/94)

This regulation provides the valuation standard for assessing all property in Alberta.

The valuation standard for a parcel of land is market value (section 2(1)(a) of AR 365/94) except those lands stated in section 2(1)(b) of AR 365/94 which are lands used for farming operations.

The valuation standard for improvements is:

- a) Depreciated replacement cost.
- b) Market value.

No matter which standard is used, the final assessment must correlate to market value.

The definition of market value in the MGA is qualified by the Standards of Assessment Regulation (AR 365/94) section 11:

“An assessment of property based on market value or depreciated replacement cost

- (a) must be prepared using mass appraisal,
- (b) must be an estimate of the value of the fee simple estate in the property, and
- (c) must reflect typical market conditions for properties similar to that property.”

AR 365/94 provides guidance for the preparation of assessments at market value. The principles and wording used in this regulation are based on standards established by credible organizations that have many years of experience in applying market value assessments.

There are key terms that are found in most if not all assessment standards. Terms such as “mass appraisal” techniques and valuing the “fee simple interest” are not unique to Alberta and are well established standards.

This handbook goes on to describe the key components of assessing property at market value. To broaden knowledge on this subject, familiarity with the Uniform Standards of Professional Appraisal Practice (USPAP), Standard 6, is suggested. Standard 6 describes mass appraisal and the generally accepted methods and techniques necessary to produce a credible valuation.

Other references on mass appraisal standards, which should be available to a practicing assessor, are the Standard on Mass Appraisal of Real Property and the Standard on the Application of the Three Approaches to Value in Mass Appraisal published by the International Association of Assessing Officers (IAAO).

The Standards of Assessment Regulation (AR 365/94) for other specific types of property either mandates or allows an assessor to use a valuation standard other than market value as follows:

Property to be Assessed	Assessment Standard
Land used for farming operations	Agricultural use value
Railway	Regulation — Schedule 1 of AR 365/94
Linear property	Depreciated replacement cost
Machinery and equipment	Outlined in section 7(2) of AR 365/94

This is the basis for a number of guidelines issued by Alberta Municipal Affairs including:

- Alberta Linear Property Assessment Minister's Guidelines.
- Alberta Farm Land Assessment Minister's Guidelines.
- Alberta Machinery and Equipment Assessment Minister's Guidelines.

The regulation also sets out quality standards (Schedule 2) and the information to be recorded (Schedule 3) when preparing assessments.

5.3 Other Assessment Regulations

There are other regulations that accompany the MGA that deal specifically with the assessment and taxation of property.

Assessable Property Regulation (AR 367/94) provides authority to prepare assessments for certain property including machinery and equipment.

Property Tax Exemption Regulation (AR 368/94) provides a partial exemption from taxation under the MGA to residences on agricultural-use land and farm buildings.

Assessment Equalization Regulation (AR 366/94) and its amendments **299/95** and **318/96**, require that in preparing an equalized assessment for a municipality, the information must reflect the total assessments for property in the municipality and be adjusted to reflect an assessment level of 1.00. This regulation also deals with equalized assessments for Lloydminster and summer villages.

Community Organization 1998 Property Tax Exemption Regulation (AR 289/97) defines those organizations that would be exempt pursuant to section 362(n) of the MGA and describes other organizations or properties that were not previously exempt from taxation and can apply to the municipality for an exemption from property tax.

5.4 Other Relevant Legislation

5.4.1 Freedom Of Information And Protection Of Privacy Act (FOIP)

Principles of the FOIP Act

Access to information. The FOIP Act legislates open and accountable government by guaranteeing applicants the right to see their own personal information and other government records, with some specific exceptions.

Protection of (personal) privacy. The FOIP Act prevents others from seeing personal information about an individual without his or her consent and ensures that personal information is protected from unauthorized collection, use or disclosure. Under the FOIP Act, the government must follow strict standards for the collection, use, and disclosure of personal information.

Municipalities will be subject to the FOIP Act on October 1, 1999. As of that date, that Act will apply to all municipal records, including those created before October 1, 1999. All records being created today for a municipality, including property assessment information, will be subject to the FOIP Act as of October 1, 1999.

5.4.2 Municipal Bylaws

If a municipality is going to prepare a supplementary assessment it must be by a bylaw passed annually no later than May 1. A second bylaw authorizes supplementary taxes. Supplementary assessments are for improvements or additions to property completed, occupied, or located in the municipality in the current year.

Every year each municipality must pass a property tax bylaw (section 369 of the MGA). This bylaw must set and show separately all of the property tax rates that must be imposed to raise municipal property tax revenues.

Glossary of Mass Appraisal Terms

Additive model	A model in which the values are adjusted or estimated by multiplying the value of property attributes - for example, a fireplace by its value per unit (\$2,000 for one fireplace, \$1,700 for a second fireplace = \$3,700 for fireplaces).
Ad valorem tax	A tax levied in proportion to the value of the things being taxed; property tax is an ad valorem tax.
Assessment	The value of property determined in accordance with legislation, or the process of assessing.
Assessment level	Assessment level for a specified group of properties means the overall ratio of assessments to indicators of market value.
Assessment progressivity	An appraisal bias such that higher value properties are appraised higher than low value properties.
Assessment regressivity	An appraisal bias such that higher value properties are appraised lower than low value properties.
Bundle of rights	Basic rights associated with private ownership of property including: <ul style="list-style-type: none">• Right to use.• Right to sell.• Right to lease or rent.• Right to enter or leave.• Right to give away.• Right to refuse to do any of the above.
Calibration	The process of estimating the values of the variables in a mass appraisal model in relation to the market.
Capitalization	Conversion of an annual income into a lump-sum value for a property (as of a given date).
Capitalization rate	The link between typical future net income and today's market value expressed as a percentage.

Coefficient	The value estimate of an independent variable.
Coefficient of Dispersion (COD)	The primary measure of appraisal uniformity used in ratio studies; measures the average percentage deviation from the median. Low CODs (15.0 or less) normally reflect good appraisal uniformity.
Coefficient of Variation (COV)	A measure that expresses standard deviation as a percentage of the arithmetic mean, which facilitates comparison of appraisal levels between groups; analogous to and interpreted in the same manner as the COD.
Comparable sales	Properties that are compared to the subject property to estimate market value or the fairness of assessed values.
Cost approach	This approach quantifies the cost in current dollars to recreate the property being assessed and assumes that a potential purchaser would pay no more for that property than the cost of replacement.
Dependent variable	A variable which depends on another variable — for example, sale price can depend on and be predicted by other variables, such as location or finished living area.
Depreciation	A loss of value from any cause.
Economic obsolescence	Decrease in desirability caused by adverse factors outside the property and usually beyond the control of the owner.
Effective tax rate	The property tax rate expressed as a percentage of market value.
Equity	The degree to which assessments bear a consistent relationship to market value. The COD and COV are customary measures.
Escheat	Property reverts to the Crown when an owner dies without heirs.
Fee simple	In land ownership, complete interest in a property, subject only to governmental powers such as eminent domain.

Functional obsolescence	Decrease in value caused by an inability of an improvement to perform its function efficiently; may be attributable to deficiencies, defects, inefficiencies, or super-adequacies of a property.
Highest and best use	That use which will generate the highest net return to the property over a period of time, given probable legal, physical, locational, and financial constraints.
Income capitalization approach	This approach analyzes the anticipated future benefits or income from a property and converts this income into an estimate of present value.
Income stream	Series of payments (usually net income payments) receivable from an investment over the life of the investment.
Independent variable	An item used to predict or explain a dependent variable.
Location variable	A variable such as the distance to the nearest commercial district or traffic count on an adjoining street that seeks to measure the contribution of locational factors to the total property value.
Market value standard	A requirement that the assessment ratio of properties be equal to 1. All property is assessed on the basis of its market value. See Alberta Regulation 365/94.
Mass appraisal	The process of valuing a universe of properties as of a given date, using standard methodology, employing common data, and allowing for statistical testing.
Mean	The average determined by adding the value of all observations and dividing by the number of observations.

Median	The middle ratio or mid-point when a number of values are ranked in order of magnitude; the base for calculating the coefficient of dispersion.
Multiple regression analysis (MRA)	Quantitative technique for measuring the magnitude of the market's response to data elements; used to relate the characteristics of sold properties to their sale prices.
Multiplicative model	A model in which the values of independent variables serve as powers (exponents) to which the independent variables are raised, or in which independent variables themselves serve as exponents; the results are then multiplied to estimate the value of the dependent variable.
Neighbourhood	The environment of a subject property or group of properties that has a direct and immediate effect on value.
Normal distribution	A theoretical frequency distribution; symmetrical and bell-shaped; 68 percent of the observations occur within one standard deviation of the mean and 95 percent within two standard deviations of the mean, and almost all (99 percent) with a measure of three standard deviations.
Outliers	Observations that have unusual values and differ markedly from a measure of central tendency.
Price-related differential	In ratio studies, the mean divided by the weighted mean. Price-related differentials above 1.03 tend to indicate assessment <u>regressivity</u> ; price-related differentials below 0.98 tend to indicate assessment <u>progressivity</u> .
Ratio studies	A study of the relationship between appraised or assessed values and market values. Indicators of market values may be either sales (sales ratio study) or independent "expert" appraisals (appraisal ratio study), or both. Of common interest in ratio studies are the level and uniformity of the appraisals or assessments.

Real property	The rights, interests, and benefits connected with real estate.
Recapture	A provision for the reduction in the economic life of an improvement; the longer the economic life, the lower the recapture rate.
Replacement costs	The costs required to construct a substitute structure having similar utility using current design, materials, and building standards.
Residual	The difference between an observed value and a predicted value for a dependent variable — for example comparison of actual and predicted sale prices.
Sales comparison approach	This approach estimates market value of the property being assessed by comparing it to similar properties that have sold recently.
Single property appraisal	The valuation of a particular property as of a given date.
Stratification	The division or grouping, for purposes of analysis of a sample of observations into two or more subsets according to some criterion or set of criteria.
Weighted mean	Aggregate ratio determined by dividing the total of appraised values by the total of sale prices; the appropriate measure of central tendency for estimating total dollar value of a number of parcels. Note: this measure is subject to sampling errors.