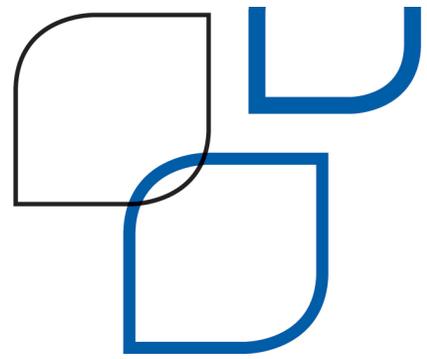




MUNICIPAL
PROPERTY
ASSESSMENT
CORPORATION



INFORMATION AND DATA SHARING POLICY
Industrial, Commercial and Multi-Residential
Properties

May 2017



MUNICIPAL PROPERTY ASSESSMENT CORPORATION

May 9, 2017

In accordance with the direction issued by the Minister of Finance on April 18, 2015, pursuant to subsection 10(1) of the [Municipal Property Assessment Corporation Act](#), the Municipal Property Assessment Corporation (MPAC) has published the Information and Data Sharing Policy that applies to all industrial, commercial and multi-residential properties.

This Policy is intended to provide clarity and transparency as to the type of information and data that assessed persons, their representatives, municipalities and other parties need to provide to MPAC for any purpose relating to the assessment of land.

MPAC's [Guidelines for the Release of Assessment Data Policy](#) for Residential Properties is available on MPAC's website.

A handwritten signature in black ink that reads "Carmelo Lipsi". The signature is written in a cursive, flowing style.

Carmelo Lipsi, B.A., M.I.M.A
Vice-President and Chief Operating Officer

Document Control

The electronic version of this document is recognized as the only valid version.

Version Number	Version Date	Summary of Changes
Original	June 2015	
01	May 2017	Updates made to reflect MPAC's revised Guidelines for the Release of Assessment Data (GRAD) Policy

Acknowledgements

As part of the preparation of the Information and Data Sharing Policy, MPAC consulted with affected taxpayers, municipalities, and representatives. MPAC engaged the International Property Tax Institute as an independent facilitator to undertake consultation sessions which included the following industries:

- Pulp & Paper Mills;
- Saw Mills;
- Value-Added Wood Manufacturing Plants;
- Steel Manufacturing Plants;
- Automotive Assembly Plants;
- Automotive Parts Manufacturing Plants;
- Mining;
- Oil Refineries;
- Chemical Manufacturing;
- Pharmaceutical Manufacturing;
- Food Manufacturing;
- Aerospace.

MPAC would like to acknowledge and thank the following parties who participated in the consultation process (September 2014 – March 2015). Questions about the consultation process can be directed to consultation@mpac.ca.

City of Hamilton	Essar Steel Algoma Inc.	DuCharme, McMillen & Associates, Inc.
City of Sault Ste. Marie	ArcelorMittal	Nixon Fleet & Poole LLP
Haldimand County	Magna International Inc.	Altus Group Limited
City of Ottawa	General Motors of Canada Limited	Equitable Value Inc.
The Corporation of the City of North Bay	Honda Canada Inc.	AEC Property Tax Solutions
City of Brampton	Canadian Vehicle Manufacturers' Association	Prestige Property Tax Specialists
City of St. Catharines	Ford Motor Company of Canada Limited	Municipal Tax Equity (MTE) Consultants Inc.
Corporation of the City of St. Thomas	Fiat Chrysler Automobiles	Cushman & Wakefield Property Tax Services
City of Guelph	Resolute Forest Products	Ryan
City of Oshawa	Domtar	Boreal Appraisal Services
City of Vaughan	Tembec	Municipal Tax Advisory Group
Township of Southwest Oxford	AV Terrace Bay Inc.	Walker West Longo
City of Cambridge	Mohawk Garnet Inc.	James Petrin Property Assessment Services
Town of Ingersoll	Goldcorp Inc.	
Town of Milton	Primero Mining Corp.	
Town of Oakville	Vale Canada Limited	
City of Greater Sudbury	Glencore	
City of Thunder Bay	Lakeshore Gold Corp.	
Town of Espanola	Suncor	
Township of Dubreuilville	Imperial	
City of Thorold	NOVA Chemicals Corp.	
City of Mississauga		

Township of James/Elk Lake
City of Sarnia
City of Toronto
Town of Whitchurch-Stouffville
Town of Whitby

Shell Canada
Purdue Pharma Canada

Purpose

The purpose of the Information and Data Sharing Policy is to identify and clarify information the Municipal Property Assessment Corporation (MPAC) requires from property owners and municipalities in order to determine accurate Current Value Assessments (CVA) for industrial, commercial and multi-residential properties. In addition, the policy will explain how valuers analyze collected data and draw valuation conclusions from this analysis as well as test these conclusions against appropriate market data.

The policy will also provide information on how MPAC safeguards proprietary information.

Timely delivery of property information is necessary for the analysis and production of accurate CVAs.

Introduction

MPAC is responsible for administering a uniform assessment system based on Current Value Assessment (CVA) in accordance with the legislation set by the Ontario government.

There are four main components in Ontario's property assessment and taxation system. Each plays an important role.

1. The **Provincial** Government passes legislation, sets property tax policies and sets education tax rates.
2. **MPAC** establishes Current Value Assessments and classifications for all properties in Ontario.
3. **Municipalities** determine their revenue requirements, set municipal tax rates and collect property taxes.
4. The **Assessment Review Board**, an independent tribunal that is part of the Environment and Land Tribunals Ontario cluster, which reports to the Ontario Ministry of the Attorney General, hears property assessment and tax appeals.

The main legislation governing the assessment of properties in Ontario for property tax purposes is contained in the *Assessment Act* 1990 (as amended).

The Act contains important definitions, including what property is taxable and how it should be valued.

The Act states that property must be assessed at its "current value" which means, in relation to land,

"... the amount of money the fee simple, if unencumbered, would realize if sold at arm's length by a willing seller to a willing buyer."

In this context, CVA equates to the notion of "market value."

Other relevant legislation will be referred to as necessary in this Guide.

Legislative Authority to Collect Property Data

Section 19(1) of the *Assessment Act* directs MPAC to assess land based on its current value.

Section 10 of the *Assessment Act* provides MPAC with the right of access to all land and buildings for the purpose of making a proper assessment, provided that:

- The MPAC property inspector produces proper identification.
- The inspection is conducted at a reasonable time.
- The inspection or request for information is for the purpose of determining the assessment of the property.

Sections 10 and 11 of the *Assessment Act* (excerpts below) require a property owner to provide MPAC with all requested information relating to the assessment of that property, either at the time of the inspection, or by responding to a letter. This information is required to be returned within a reasonable time.

Accurate data is necessary to produce accurate CVAs. MPAC property data is updated regularly using a variety of sources, including:

- land title documents registered at Ontario Land Registry Offices
- digital imagery
- building permits issued by local municipalities
- discussions and correspondence with property owners
- on-site property inspections
- questionnaires

Right of access

10. (1) *A person authorized by the assessment corporation, upon producing proper identification, shall at all reasonable times and upon reasonable request be given free access to all land and to all parts of every building, structure, machinery and fixture erected or placed upon, in, over, under or affixed to the land, for the purpose of making a proper assessment thereof. R.S.O. 1990, c. A.31, s. 10 (1); 1997, c. 5, s. 6 (1); 2006, c. 33, Sched. A, s. 10.*

Information

(2) *Every adult person present on land when any person referred to in subsection (1) visits the land in the performance of his or her duties shall upon request give to the person all the information in his or her knowledge that will assist the person to make a proper assessment of the land and every building, structure, machinery and fixture erected or placed upon, in, over, under or affixed to the land and to obtain the information he or she requires with respect to any person whose name he or she is required to enter on the assessment roll or concerning whom he or she is required to obtain any information for the purpose of the enumeration required by section 15. R.S.O. 1990, c. A.31, s. 10 (2); 1997, c. 5, s. 6 (2).*

Request for information

11. (1) *For any purpose relating to the assessment of land, the assessment corporation may, by letter sent by mail, served personally or delivered by courier, require a person who is or may be assessed in respect of the land to provide any information or produce any document relating to the assessment of land within such reasonable time as is set out in the letter. 1997, c. 5, s. 7; 2006, c. 33, Sched. A, s. 11 (1).*

Return of information

(2) *A person who receives a letter under subsection (1) shall, within the time set out in the letter, provide to the assessment corporation all the information required that is within the person's knowledge and produce all the documents required that are within the person's possession or control. 1997, c. 5, s. 7; 2006, c. 33, Sched. A, s. 11 (2).*

Compliance to MPAC's Data Collection Requests

Pursuant to s.40 (18) of the *Assessment Act*, in cases where property owners fail to respond fully to MPAC's requests, the Assessment Review Board has authority to order that the burden

of proof as to the correctness of the current value of the land to rest with the appellant, not MPAC, in the event of any appeals filed with respect to the assessment.

Same, non-co-operation

S. 40 (18) Despite subsection (17), the burden of proof as to the correctness of the current value of the land rests with the appellant where he or she fails or refuses,

(a) to give the assessment corporation reasonable opportunity to inspect the property under section 10; or

(b) to comply with a request for information and documentation under section 11. 2008, c. 7, Sched. A, s. 11.

Additionally, MPAC may pursue application of the enforcement provisions found under s. 13 of the *Assessment Act*, for instances where requests for information are not satisfied.

Offence for not furnishing information

13. (1) Every person who, having been required to furnish information under section 10 or 11 makes default in delivering or furnishing it, every person who fails to provide information as required under section 16.1 or 16.2 and any corporation that makes default in delivering the statement or notice mentioned in section 25 or 30, is guilty of an offence and on conviction is liable to a fine of not more than \$1,000 and an additional fine of \$100 for each day during which default continues. R.S.O. 1990, c. A.31, s. 13 (1); 1997, c. 5, s. 8; 2006, c. 34, Sched. D, s. 94 (5).

For false statement

(2) Every person who knowingly states anything false in any such statement or in furnishing the information is guilty of an offence and on conviction is liable to a fine of not more than \$2,000. R.S.O. 1990, c. A.31, s. 13 (2).

Idem

(3) Every person who has made, or participated in, assented to or acquiesced in the making of, a false or deceptive statement in any application or supporting document required to determine eligibility for exemption from taxation under paragraph 22 of subsection 3 (1) is guilty of an offence and on conviction is liable to a fine of the amount

of the tax that, had the true facts been stated, would have been payable, plus an amount of not more than \$2,000. R.S.O. 1990, c. A.31, s. 13 (3).

For obstructing the assessment corporation, etc.

(4) Every person who wilfully obstructs or interferes with any person referred to in subsection 10 (1) in the performance of any of his or her duties or the exercise of his or her rights, powers and privileges under this Act is guilty of an offence and on conviction is liable to a fine of not more than \$2,000. R.S.O. 1990, c. A.31, s. 13 (4).

MPAC's Commitment to the Protection of Personal Privacy

MPAC is committed to the protection of privacy by managing the collection, use, disclosure, retention and disposal of personal and non-personal information in a manner that complies with the requirements of the *Municipal Freedom of Information and Protection of Privacy Act* (MFIPPA), the *Assessment Act*, the Information and Privacy Commissioner/Ontario (IPC) and all other relevant legislation, regulations and tribunal/judicial rulings.

“Personal information” as defined by the *Municipal Freedom of Information and Protection of Privacy Act* means recorded information about an identifiable individual and includes, but is not limited to, a person's name, address, telephone number, religion, age, sex, marital or family status or financial transactions involving the individual.

MPAC may, from time to time, release aggregate information in the form of demographic studies or other extracts constructed from the analysis of personal information. However, these products neither identify individuals nor enable others to extrapolate their identities. Such requests for information, or any matters that require clarification or legislative interpretation, are investigated by MPAC's Manager of Freedom of Information and Records Management, who will ensure MPAC is in compliance with the applicable legislation.

Except as permitted/required by law, MPAC does not release income and expense information, personal information, or any other data that would enable the identification of individuals.

If after an appeal has been filed, MPAC receives a request for the release of actual income and expense information, or other sensitive commercial proprietary information, the usual practice is to require the person seeking the information to bring a motion before the Assessment Review Board (ARB), with notice to the third parties, requesting that the ARB order production of the requested information. The release of such information is at the discretion of the ARB.

Exception

S. 53 (2) This section does not prevent disclosure of that information,

(a) to the assessment corporation or any authorized employee of the corporation; or

(b) by any person being examined as a witness in an assessment appeal or in a proceeding in court involving an assessment matter. 1996, c. 4, s. 43; 1997, c. 43, Sched. G, s. 18 (34).

Access to Information

Every property owner has the right to know and access the information MPAC has on file for their property as well as receive information and assistance to help them understand their assessment. Property owners can access information about their property and other properties free of charge from MPAC.

This information includes:

- the physical characteristics of a property
- its location
- classification
- assessed value and other related assessment information

Property owners can review the value of their property and comparable properties to help determine whether their property's assessed value is in line with current market values and if their assessed value is equitable. This information is useful if a property owner files a Request for Reconsideration and may also serve as the basis for an Assessment Review Board appeal.

Requesting Property Information from MPAC

The owner of a property or a person who has received or is entitled to receive a Property Assessment Notice may request information about their property.

Persons licensed by the Law Society of Upper Canada to practice law (lawyers) or provide legal services (paralegals) may request factual information on behalf of a property owner. A Representative Authorization Form signed by the property owner is not required.

An individual exempt from licensing by the Law Society of Upper Canada may request factual information on behalf of a property owner. Individuals exempt from licensing include:

- An individual acting for a family member, friend or neighbour.
- An individual acting for a non-profit organization.
- An individual who is employed by a single employer and provides the legal services only for that employer and to no person other than the employer.
- A constituency assistant.

Exempt individuals acting on behalf of the property owner must submit a Representative Authorization Form signed by the property owner every taxation year.

In addition, members of the Human Resources Professionals Association of Ontario have a limited exemption from Law Society licensing, if they provide legal services only occasionally, and ancillary to the carrying on of their profession or occupation. Members of this organization are required to provide a membership number or suitable identifier.

All requests for property information from persons who are not licensed by the Law Society but wish to represent a property owner must:

- Fully complete (every taxation year) MPAC's standard Representative Authorization Form, or,
- Provide MPAC with a written statement signed by the owner, authorized company signatory, executor of an estate, person with power of attorney authorization, etc. every taxation year. If this is a request from a corporation, corporate letterhead must be used.

All requests for property information must contain:

- the property assessment roll number
- property address
- owner name(s)
- mailing address
- telephone number, fax number (if applicable), and email address (if applicable)

If the request is from a property owner's representative, the representative's name, company name (if any), mailing address, phone number, fax number and email address must be included in the request letter.

Note to Representatives: MPAC's provision of information to authorized representatives should not be construed as an acknowledgement of any right to act on behalf of any person in the provision of legal services as defined by the *Law Society Act (section 1(6))*. MPAC will only engage in discussion with respect to a Request for Reconsideration or an assessment appeal with persons who are licensed by the Law Society or individuals who are specifically exempted by the Law Society as outlined above.

For more information on licensing and exemptions from licensing, please visit the Law Society of Upper Canada website at www.lsuc.on.ca.

For an online copy of the Representative Authorization Form, click [here](#).

Available Reports and Information

AboutMyProperty™

MPAC's AboutMyProperty™ is a secure website that provides property owners with assessment information for their property and similar properties in their area. Through this self-serve application, property owners can access basic information such as year of construction, square footage, site area, legal description and Current Value Assessment on up to 100 properties. Property owners can also request a detailed report that includes assessment information, site information, recent sales information and structural information on their own property and up to 24 other properties of their choice. This information is free of charge through aboutmyproperty.ca.

For information requested through AboutMyProperty™ the following reports are provided free of charge to property owners for each taxation year:

- One (1) Property Profile Report for each property.
- Up to 100 Property Snapshots.
- A Favourites Report on up to twenty-four (24) properties selected by the property owner.

The following information is also available:

- A Methodology Guide – a comprehensive guide that explains the assessment methodology used to assess the property.
- A Market Valuation Report – A comprehensive report that explains how assessment methodology was applied at a sector level to value the property for the 2016 Assessment Update.

If the record is not displayed in AboutMyProperty™, property owners may follow the options below for making a written request to MPAC.

Property owners without high speed Internet access at home wishing to access AboutMyProperty™ may visit any of MPAC's field offices, ServiceOntario Service Centres and participating public libraries.

Written Requests for Information

The following information is available to property taxpayers free of charge for each taxation year:

- One (1) Property Profile Report for their property.
- A Favourites Report on up to twenty-four (24) properties of a property taxpayer's choice.

Also available free of charge upon request is a Methodology Guide and a Market Valuation Report. For more information about these reports [click here](#).

Information for tenants

Upon request, a tenant is entitled to receive the information maintained by MPAC in respect of a property, or the portion of a property, leased by the tenant and to receive any other information about the property.

Tenants of properties valued on the income approach can gain access to:

- Information pertaining to the space they occupy.
- Gross Leasable Area of the building (common areas and corridors are not included).
- Total assessed value of the property.

- Vacancy and Expense Allowance.
- Capitalization Rate or Gross Income Multiplier (GIM) used to value the property.
- Fair Market Rent. In the instance where fair market rents and actual rents are the same, this information cannot be released without proper authorization by the owner.

As outlined in section 53. (4.1) of the *Assessment Act*, tenants are **not** entitled to any actual income and expense information for the property.

Properties valued on the income approach include shopping centers, office buildings, commercial/industrial malls and apartments.

Government Bodies

MPAC provides a variety of products and services (including those required or permitted by legislation or regulation) to municipal, provincial and federal governments and their agencies. Depending on the product or service, MPAC may or may not charge a fee.

Municipalities and Third Parties

Municipalities are statutory parties to all assessment appeals. In addition, other persons may file appeals or be added as parties to appeals by the Assessment Review Board (ARB). These other persons are referred to as “third parties.” When responding to Requests for Information from municipalities and third parties, MPAC staff must comply with the requirements of the *Assessment Act*, the *Municipal Freedom of Information and Protection of Privacy Act* and the *Municipal Property Assessment Corporation Act*.

Municipalities requesting information about a property they own have the same entitlements as any other property owner under this policy. They may receive:

- One (1) Property Profile report and up to 24 comparable properties – free of charge.

Municipalities and third parties requesting information about properties they do not own, are entitled to receive the same number of reports listed above, free of charge, only when the information is required for preparation related to an appeal properly filed with the ARB by the municipality or a third party. Copies of all information provided to municipalities and third parties under this process are also forwarded to the respective property owner.

Upon request, municipalities and third parties who choose to participate in the preliminary proceedings, settlement negotiations and hearings with respect to an assessment appeal are

provided all information listed above, free of charge, and on a timely basis. The exception to this is any actual income or expense data.

When a request is not related to an assessment appeal, or where the request exceeds the free entitlements listed above, a fee will be charged for the products. Please refer to MPAC's Product Catalogue and Pricing, for applicable rates, at propertyline.ca. If the property is valued using the income approach, and actual income and expense information is requested, parties must either obtain the consent of the owner or an order from the ARB.

If you require any additional information on how to access property information from MPAC, please [contact us](#).

General Valuation of Property

Valuations of property are carried out for a variety of purposes. The legislation governing the assessment of properties for property tax purposes in Ontario is set out above. It requires an assessment of the "current value" of all properties as at a specific valuation date.

The valuation process follows a number of systematic steps intended to ensure that all relevant data is obtained and analyzed before being used in the provision of an estimate of the market value of the property concerned as at the relevant date.

In broad terms, the valuation process involves the following key steps:

- Ensuring a clear understanding of the purpose for which the valuation is being provided.
- Researching the legal framework concerning the valuation.
- Identifying the date of the valuation.
- Analyzing the relevant market (international, regional and/or local depending upon the type of property to be valued).
- Considering the highest and best use of the subject property.
- Obtaining pre-inspection data about the property to be valued.
- Carrying out a site inspection of the property to be valued.
- Taking appropriate measurements and recording details of other relevant information while on site.

- Carrying out an inspection of any comparable properties that may be of assistance in ascertaining the value of the subject property.
- Determining the appropriate method, or methods, of valuation to be used.
- Carrying out the valuation.
- Reviewing the valuation.
- Finalizing and reporting the valuation.

There are three common approaches to determining the current value of any property.

Approach	How current value is determined	Examples of property types
	<p>The income approach is normally used where the value of the property is dependent upon the income it can generate. The income that is, or can be, generated from rents or other income in relation to the property being valued is converted into a capital sum (current value) by the use of a capitalization rate which is derived from analysis of actual sales in the market. MPAC use the “direct capitalization” method for the valuation of a variety of properties.</p>	<p>Hotel, Office Building, Shopping Centre, Golf Course</p>
Cost Approach	<p>The cost approach is based upon the “principle of substitution,” which means that, if the direct sales comparison or income approaches are not appropriate, a prospective purchaser of a property would have regard to the cost of providing a similar property to the one being valued in determining the current value of the property. The method is based upon estimating the cost of replacing the existing building, adjusting that cost to reflect any depreciation in the existing building, and adding the value of the land. MPAC’s experts have access to up to date, comprehensive building cost data to support this valuation approach.</p>	<p>Petro Chemical Manufacturing, Automotive Assembly Plants, Automotive Parts Manufacturing, Mining, Aerospace Manufacturing, Food Manufacturing, Steel Manufacturing, Value Added Wood Products Manufacturing, Pharmaceutical Manufacturing, Paper Manufacturing, Pulp Manufacturing, Lumber Manufacturing</p>
Direct Sales Comparison Approach	<p>This valuation method uses the sale prices of properties that have sold of a similar nature to develop market-driven price adjustments to value a subject property. MPAC experts analyze hundreds of sale prices within a given market area to develop price adjustments for physical and locational differences between properties to establish a current value estimate for all properties of a similar nature. Typically, adjustments to sale prices are required to recognize price differences due to building area, age, lot size, construction quality and location. Other adjustments are often required to recognize price differences due to other building and site related features.</p>	<p>Single family residence Condominium Vacant Land</p>

Collection of Data from Property Owners

The primary goal of a mass appraisal process is to value many properties in a consistent and efficient manner. Mass appraisal is the process of valuing a group of properties as of a fixed valuation date using common data and methods and allowing for statistical testing to determine the overall quality of the value estimates. One way to achieve this efficiency is to develop an approach that can be applied to a group of similar properties. This enables the comparison of value from one property to another, and the establishment of value for each property based on the typical outlook of the marketplace. This approach ensures that:

- All properties forming part of the group are valued.
- All similar properties are valued using a similar, defined uniform process that takes into account the typical perspective of the marketplace.
- Properties with characteristics that are dissimilar to those within the group are identified and valued using different parameters.

Therefore, the mass appraisal process begins with a study of all properties to be valued so that they can be classified into appropriate groups.

MPAC may request property specific information from property owners in advance of legislated assessment update deadlines, and upon or near completion of a renovation or construction of a new building.

The collection of data necessary for producing accurate values will vary slightly depending on the valuation approach, with information generally collected through the following sources:

Income Approach to Valuation

1. Existing assessment records.
2. Complete access to the property in order to perform a thorough physical inspection of both the outside and inside of the property, in order to obtain and/or verify the accuracy of the building and site characteristics, and to identify whether or not any changes have been made since MPAC's last visit.
3. Rent roll.
4. Income and expense information.
5. Sales data.
6. Industry related publications.
7. Corporate website.

Property Income and Expense Return Program Resources

The income approach determines the annual market rental income less market vacancy and expense allowances. Then a capitalization rate is applied to the annual income to arrive at a current value for the property.

MPAC uses a particular type of income approach known as the direct capitalization method of valuation. This method capitalizes (converts) the expected level of current fair market net annual earnings into an estimate of market value using a capitalization rate.

Fair market rent is the rent that the space would most probably command if it were vacant and available on the open market as of a specific date. Estimating market rent can be done by direct comparison to current rents negotiated for similar space or to the prevailing rental rate in the marketplace for comparable space leased under similar terms and conditions as of the valuation date.

The capitalization rate is derived from analysis of market transactions - both leases and sales.

After collecting the sales data, MPAC groups the data for analysis to establish the various capitalization rates and other market factors. This data will be used to value comparable properties within a specific location.

MPAC assigns the data into appropriate groups so that comparisons can be made between different properties for the purpose of ranking and valuing properties.

Valuation

The Income Approach to the valuation has the following components:

- Determine the Potential Gross Income (PGI) – based on market rents and other income as of the effective date of valuation.
- Adjust the PGI for vacancy to arrive at the Effective Gross Income (EGI).
- Adjust the EGI for non-recoverable expenses to arrive at the Net Operating Income (NOI).
- Apply the capitalization rate to the NOI to arrive at the current value of the income-producing property.
- Add for any excess land or other part of the property not included in the income-producing part of the property.

Potential Gross Income

MPAC uses the information it has collected about actual net rents paid in the market to determine the Potential Gross Income of gross rentable space. Although the actual net rent paid is important, the value of the property will reflect its market income rather than the actual income.

The property may also contain retail, parking and storage revenues therefore the potential income from these sources has to be determined.

Effective Gross Income

It is necessary to adjust the Potential Gross Income to take account of vacancies; properties will often lose some income over the life of the investment due to vacancy, e.g., between tenants moving out and others moving in.

MPAC establishes the normal vacancy rate based on the analysis of information provided by property owners.

This vacancy allowance is used to adjust the Potential Gross Income to derive an Effective Gross Income.

Net Operating Income

The next stage in the valuation process is to convert the Effective Gross Income into Net Operating Income (NOI).

MPAC uses the information it has obtained from property owners to identify normal or typical deductions that have to be made for management and other operating expenses (e.g., legal fees) that cannot be recovered from tenants by the owner.

Once the NOI has been established, MPAC proceeds to the final valuation stage by applying the relevant capitalization rate to that income.

Capitalization Rate

MPAC's analysis of market sales shows what capitalization rate was used in the transaction.

The capitalization rate will vary depending upon a number of factors including the type and location and its net income.

The overall capitalization rate of each sale is determined by using the following formula:

$$\text{Capitalization Rate} = \frac{\text{Net Operating Income}}{\text{Property Purchase Price}}$$

Capitalization rates are adjusted for time by adjusting the sale price, i.e., to reflect any difference between the date of sale and the date of valuation.

The capitalization rate appropriate for the property will depend upon its classification/grouping and location.

Cost Approach to Valuation

The following steps are taken in utilizing the Cost Approach to valuation.

1. A physical inspection of the property to obtain the current physical state and condition of the property. The inspection should confirm and establish all of the details about the improvements, their construction, condition, and use. Details should be confirmed and notes made about the quality and type of construction materials used for the following:
 - landscaping

- site preparation
- foundations
- framing
- walls
- floor
- ceiling structure
- roof covering
- plumbing
- lighting/electrical
- heating, ventilation, air conditioning (HVAC)
- doors
- elevators
- stairs
- fire systems and sprinklers
- finishes
- paving
- rail siding
- yard improvements
- other assessable items
- availability of municipal services

2. Corporate website.

3. Architectural building plans/drawings.

4. Interview with property owner or facility manager (where appropriate) to evaluate whether or not external obsolescence, functional obsolescence, from excess capital costs, and functional obsolescence from excess operation costs apply. Examples of some of the information that will be requested during the interview include:

- Current staffing numbers, i.e., have they increased or decreased?
- Actual design capacity vs. current production (under or over utilization).
- Are there any plans for future expansion?
- Who do you supply/where does your product go?
- Main competitors.
- How do you ship your product?
- How and where do your raw materials come from, i.e., air, water, rail or road?
- Production capacity of subject property.
- Capacity utilization of the past 12 months.
- Total revenue for the past 12 months.
- Any structural deficiencies that arose during the past 12 months.
- Outlook for the next 12 months (i.e., same, better or worse) with a brief explanation.

5. Breakdown of construction costs.

Replacement Cost

MPAC generally uses the cost approach to value large industrial and special purpose properties.

Unlike many other types of property, large industrial and special purpose properties are rarely sold or leased. They are usually built by their owners to meet their particular needs.

Therefore, there is often insufficient information to apply the direct sales comparison approach or the income approach to predict value.

For these reasons, the cost approach is adopted in valuing large industrial and special purpose properties.

The objective of the costing exercise is to determine the depreciated replacement cost of the improvements. A replacement building reflects what actually would be built if the building and other structures were to be rebuilt.

Replacements are therefore designed to replace the existing functions and capacity of the property. The replacement reflects advances in technology and in the design, layout, and construction of the improvements. Replacement cost therefore takes into account many of the elements that give rise to the functional obsolescence inherent in a property.

Determining Replacement Cost

The cost new of a property is normally arrived at by measuring and quantifying the existing improvements, and then determining the cost of replicating the quality, quantity, and layout of these structures based on information contained in a reputable standard cost manual.

MPAC has access to a variety of widely recognized cost manuals along with other building cost data collected during the course of their activities.

Automated Cost System

MPAC has developed a system called the Automated Cost System (ACS) for use when a property is being valued by the cost approach.

The ACS ensures that a consistent approach is used by MPAC when valuing properties using the cost approach.

The ACS contains data which reflects the cost of labour, equipment and materials for each structural element of an improvement; it also reflects depreciation resulting from the effective age of the buildings or structures.

Cost Options

When considering replacement cost, MPAC has three choices:

1. **Replication** of the existing improvements including the layout, quantity and materials found at the actual property.
2. **Replication** of existing improvements including the layout and quantity but replacing the materials and construction techniques with more modern substitutes.

3. **Replacing** or substituting the existing improvements with a facility of modern design, quantity, and layout.

Depreciation

The difference between the cost of a new building and the amount the market would pay for an existing property is the depreciation inherent in the property.

Depreciation can be quite complex and adjustments to replacement cost to accurately reflect depreciation requires knowledge, analysis and judgment.

MPAC has experts who have many years of experience in making these judgments. MPAC's ACS system incorporates adjustments for effective age-related depreciation.

Applying the Cost Approach

There are two principle tasks in estimating market value using the cost approach:

- valuing the land
- valuing the improvements (i.e., the buildings and structures)

Valuing the Land

The land is valued as if it was vacant; its current value is established through analysis of comparable market sales data.

MPAC collects information about the sale of land for all industrial and/or special purpose properties and analyzes this data so it can be used for application of value.

Valuing the Improvements

MPAC inspects the property to collect physical and descriptive data about the land and buildings (age, size, use, etc.).

MPAC then carries out a costing exercise (using its ACS) to determine the replacement cost of the assessable buildings and structures.

MPAC then deducts from this replacement cost "as if new," an appropriate age/condition related allowance based upon the effective chronological and condition related age of the structure or building as of the base year assessment.

MPAC then adjusts the depreciated replacement cost to reflect various forms of functional, as well as external obsolescence.

Obsolescence

Adjustments may have to be made in the valuation to reflect depreciation due to the age or condition of the building.

However, further adjustments may need to be made for:

- Functional obsolescence – this may be due to a reduction in the utility of the property; e.g., the existing layout of the building may not be as efficient as a modern replacement.
- External obsolescence – this may be due to factors not directly related to the property; e.g., changes in the market.

MPAC uses a method called allocation of market-extracted depreciation to determine the adjustment that may be necessary for external obsolescence.

MPAC experts analyze all sales to determine the following at the time of sale: land value, cost new, physical deterioration and functional obsolescence.

The outcome of this analysis is compared to the sale price (assessment to sale ratio) to identify any external obsolescence. Using this method MPAC experts are able to use market evidence to adjust for any external obsolescence in preparing their assessed values.

Having made all appropriate adjustments to the replacement cost for depreciation and obsolescence, the resulting value will be an estimate of the contribution of the improvements to the market value of the subject, depreciated for all causes.

A summary of the steps taken by MPAC follows:

1. Identify all properties that sold.
2. For each of the sold properties MPAC determines:
 - the land value at time of sale
 - the cost new at time of sale
 - the physical deterioration at time of sale

- the functional obsolescence at time of sale

3. Calculate the cost new, less physical deterioration and functional obsolescence, plus land value for each of the sold properties.

A ratio study is completed whereby the preliminary assessed values are compared to the sale amounts to verify the presence of external obsolescence.

If the resultant assessment to sale ratio (ASR) is greater than 1.00 it indicates that there is external obsolescence.

A factor is applied to the preliminary assessed values to bring the ASR closer to 1.00 causing the cost approach to indicate values that reflect the actions of market participants.

A very basic example for similarly improved properties follows:

Line No	Formula	Comp 1	Comp 2	Comp 3	Comp 4
1 Sale Price		\$1,000,000	\$900,000	\$1,400,000	\$830,000
2 Cost New		\$1,600,000	\$1,350,000	\$2,000,000	\$1,750,000
3 Physical Deterioration		\$350,000	\$275,000	\$425,000	\$650,000
4 Functional Obsolescence		\$100,000	\$0	\$225,000	\$150,000
5 Land Value		\$300,000	\$150,000	\$400,000	\$175,000
6 Preliminary Value	Line 2 - Line 3 - Line 4+ Line 5	\$1,450,000	\$1,225,000	\$1,750,000	\$1,125,000
7 ASR	Line 6 / Line 1	1.45	1.36	1.25	1.35

A factor is required to adjust the preliminary values to values much closer to current value. On the assumption that the cost new, physical deterioration, functional obsolescence, and land value are correct the factor is entirely attributable to external obsolescence.

Application of the factor to the example results in the following:

Line No	Formula	Comp 1	Comp 2	Comp 3	Comp 4
1 Sale Price	\$1,000,000	\$900,000	\$1,400,000	\$830,000	
2 Land Value	\$300,000	\$150,000	\$400,000	\$175,000	
3 Market Improvement Residual	Line 1 - Line 2	\$700,000	\$750,000	\$1,000,000	\$655,000
4 Depreciated Improvement Value*	See footnote 1	\$1,150,000	\$1,075,000	\$1,350,000	\$950,000
5 Indicated External Obsolescence	Line 4 / Line 3	1.64	1.43	1.35	1.45
6 Median Indicated		1.44	1.44	1.44	1.44

*The depreciated improvement value is the result of subtracting the physical deterioration and functional obsolescence allotments from the cost new estimate. Reference should be made to preceding table.

The indicated median of 1.44 is converted into a factor to calculate the allotment for external obsolescence. The factor is the result of the following formula:

$$[1-(1.00/1.44)]=.305$$

The factor of .305 is applied to the depreciated improvement value only; the land value is not adjusted.

Final Value

The sum of the **land value** plus the depreciated **improvement value** becomes the assessed value.

Direct Sales Comparison Approach to Valuation

1. A physical inspection of the property to obtain the current physical state and condition of the property.
2. Building permits.
3. Architectural building plans/drawings.
4. Sales data.

MPAC uses the direct sales comparison approach as its method of valuing most properties in Ontario. Although this approach is mostly applied to residential properties, where there is a higher frequency of open market sales transactions, small commercial and industrial properties are also valued using the sales comparison approach. This approach to value is based on the theory that the current value of a property is directly related to the sale prices of similar properties.

The sales comparison approach to value estimates the current value of a subject property by adjusting the sale prices of comparable properties for differences between the comparable properties and the subject property.

MPAC is able to determine accurate values for large groups of properties based on common data and mass appraisal techniques. In addition to recent sales, MPAC looks at the key features of every property. There are, however, five major factors that account for 85% of the value:

1. location
2. lot dimensions
3. living area
4. age of the property, adjusted for any major renovations or additions
5. quality of construction

MPAC receives all land title documents registered at the 54 Land Registry Offices across Ontario.

These documents contain information such as the owner's name, mailing address, legal description, sale amount, and sale date, which is entered in MPAC's database.

Not all sales transactions are considered to be arm's length transactions or representative of the market. Only those sales that are considered to represent valid open market sales are included in MPAC's analysis. The key elements of a valid sale are:

- It is an arm's length transaction in the open market.
- The property had a reasonable period of time for exposure to the market.
- The sale amount is expressed in terms of money.

Examples of invalid sales are:

- Transactions between family members or between a parent company and its subsidiary.
- Quit claims (i.e., a deed is registered to correct a discrepancy on title).
- Forced sales (e.g., bankruptcy of vendor).
- Speculative sales (e.g., purchased for an anticipating future use of the property).
- Sales by the government or some other organization that is exempt from paying property taxes.
- Sales based on non-typical financing.
- Sales that represent only a partial interest in the property.
- Agreements of purchase and sale, where the sale price is negotiated and agreed to, much earlier than the close of the sale.

To determine whether a sale is valid, MPAC will conduct a sales review and complete one or more of the following activities:

- A property inspection.
- Mailing or delivering a sales questionnaire to the new owner.
- Telephoning the vendor, the purchaser, and/or real estate agent.
- A review of other real estate information sources.

When MPAC inspects a property as part of a sales review, MPAC staff will inspect the land and all buildings. The purpose of the inspection is to verify that all of the land and building

characteristics recorded on MPAC's database are an accurate reflection of the property at-time-of-sale. MPAC staff will also identify whether any changes have been made, either before or after the sale, that need to be reflected in the assessed value of the property.

In mass appraisal, the sales comparison approach is applied by developing a property valuation model that develops estimates of value, based on physical and location characteristics such as building area, age, lot dimensions, and immediate neighbourhood.

All value adjustments are derived directly from the local marketplace. A mass-appraisal process results in estimates of value that are accurate in comparison to actual sales in the local market, and uniform in comparison to similar properties.

Section 19.2(1) of the *Assessment Act* requires that MPAC produce estimates of value as of a legislated valuation date. This requires MPAC to adjust sale prices to the legislated valuation date to reflect any market change over time.

Property Valuation Model Building

Each property in Ontario is assigned to a market area, locational neighbourhood and sub-neighbourhood for valuation purposes.

Market areas are geographic areas subject to the same economic influences. Properties in a market area tend to move up or down together in value and will be in competition with one another in the marketplace. They are usually, but need not be geographically contiguous. Sales from each market area are analyzed to develop a property valuation model to value all properties within that market area.

Model Specification

Model specification is the first step in the valuation work in a mass appraisal process. It determines the data to include in the property valuation model, and in what format. The model should include all property characteristics that influence value in the local marketplace.

In most cases, 85 per cent of a property's value can be attributed to location, age, construction quality, building area, and lot dimensions. The remaining 15 per cent can be attributed to features that may affect the value either positively or negatively, e.g., a property located next to a golf course or a property located on a major thoroughfare.

One property valuation model is specified for each market area. In Computer Assisted Mass Appraisal, the most common type of model used to value properties is an additive Multiple Regression Analysis model. With this type of model, a base value is developed, and the

property valuation model will add or subtract value based on the adjustments within the model and the property characteristics on file for your property.

A sample specified additive Multiple Regression Analysis model is as follows:

$$CV = \text{Base Value} + b1 * \text{Building Area} - b2 * \text{Age} + b3 * \text{Lot Size} + b4 * \text{NBHD2} + b5 * \text{NBHD3}.$$

Model Calibration

Model calibration is the development of the adjustments from the sales comparison analysis of the property characteristics to be used in the property valuation model.

A sample calibrated additive Multiple Regression Analysis model using the specified model from above is:

$$CV = \$125,400 + \$48.00 * \text{Building Area} - \$1,600 * \text{Age} + \$1.00 * \text{Lot Size} - \$4,800 * \text{NBHD2} + \$3,000 * \text{NBHD3}.$$

While the general value influences are consistent across each market type and area, their relative importance will vary between markets.

Direct Sales Comparison Approach Model Testing

Once each model is developed, it is tested to ensure it produces values that are accurate, consistent and fair. These tests are completed using industry standard sales ratio studies.

For example, values are tested to ensure older and newer buildings are assessed at the same level of assessment (i.e., the model is not undervaluing newer properties and overvaluing older properties). The ratio study is completed for all major value contributors (i.e., building area, construction quality, age, lot dimensions, and location) prior to the application of the model to all properties within the market area. If the model is found to produce inaccurate initial estimates of value for a given property characteristic or neighbourhood, the problem may be corrected by re-specifying and re-calibrating the model or an adjustment may be developed based on the results of the sales ratio study.

Fine-Tuning of Values

Individual values developed using the sales comparison approach are reviewed for reasonableness and consistency with recent sales, either of the subject property itself, or of similar properties in the same area.

In situations where the estimate of current value appears to be unreasonable or inconsistent, the values are adjusted.

The purpose of this review is to reconcile the initial estimates of value to ensure that a fair and equitable assessment has been placed on each property. Unique situations will exist where individual properties may require further adjustments to achieve current value.

Upon completion of the individual value review process, the estimates of value produced by the sales comparison approach to value through the mass appraisal process are considered fit for use as Current Value Assessments.

Collection of Data from Municipalities

Municipalities collect integral property information from property owners, and create policy that can significantly influence Current Value Assessments (CVA). The information necessary for municipalities to share with MPAC, for producing accurate CVAs, is as follows:

- All new building permits details, including all status updates throughout the construction process.
- Approved set of architectural building plans/drawings.
- Current zoning, including secondary plan information, and all updates as they occur.

These data requirements are being requested by MPAC in order to:

- Identify new construction or renovations that may contribute to CVA changes.
- Workload management and prioritization of building permit related activities.
- Enables process efficiencies leading to timelier assessment delivery.
- Accurately reflect current land use policies in determining CVA and classification of land; and, for establishing the existence and value of excess land.

Format for Delivery of Municipal Data

- Web Services.
- Standardize format – electronic.
- GIS Parcel fabric.

- Accessibility to paper documents, in the absence of the above. It is worth noting, however, that paper exchange requires greater processing effort, leading to delays in product deliverables.

MPAC Products and Services Link Web Services

Web services are software systems designed to enable direct electronic data transfer over the Internet between two computers using XML coding.

Municipalities are able to use these services to efficiently submit and extract information such as property details, building permits, inspections, and much more.

Additional details and instructions regarding the initiation of any one of the above information exchange initiatives can be arranged with MPAC's Municipal and Stakeholder Relations department.

Appendix A – Glossary of Terms

These definitions are from a variety of sources including Property Appraisal and Assessment Administration, Joseph Eckert, ed. IAAO and The Appraisal of Real Estate, Appraisal Institute, 12th Edition.

Accrued depreciation	The amount of depreciation from any and all sources that affects the value of the property in question.
Actual Age	Sometimes called “historical age” or “chronological age”. It is the number of years that has elapsed since building construction was completed.
Age/life method	A method of estimating accrued depreciation founded on the premise that, in the aggregate, a neat mathematical function can be used to infer accrued depreciation from the age of a property and its economic life.
Approaches to value	One or more of three approaches to value, namely (a) cost (b) sales comparison (c) income capitalization. The approaches employed will allow the assessor to determine the value of the property.
Assessment equity	The degree to which assessments bear a consistent relationship to market value.
Assessed value	Assessed value applies in ad valorem taxation and refers to the value of the property according to the tax rolls.
Breakdown method	A method for estimating total depreciation by specifying the amount of each kind of depreciation, often for each major building component, (including physical, functional and external).
Chronological age	The number of years elapsed since an original structure was built. Synonymous are <i>actual age</i> and <i>historical age</i> . Contrast with effective age.

Comparables, Comparable Sales	Recently sold properties that are similar in important respects to a property being appraised. The sale price and the physical, functional, and locational characteristics of each of the properties are compared to the property being appraised in order to arrive at an estimate of value. By extension, the term <i>comparables</i> is sometimes used to refer to properties with rent or income patterns comparable to the property being appraised.
Cost	The total dollar expenditure for an improvement (structure).
Cost Approach	Value as estimated as the current cost of reproducing or replacing the improvements (including the appropriate entrepreneurial incentive or profit) minus the loss in value from depreciation, plus land or site value.
Current value assessment (CVA)	As defined in the Assessment Act Section 1: Current value means, in relation to land, the amount of money the fee simple, if unencumbered, would realize if sold at arm's length by a willing seller to a willing buyer.
Deferred maintenance	Repairs and similar improvements that normally would have been made to a property but were not made to the property in question, thus increasing the amount of its depreciation.
Depreciation	The loss in value of an object, relative to its replacement cost, reproduction cost, or original cost whatever the cause of the loss in value. Depreciation is sometimes subdivided into three types: physical deterioration (wear and tear), functional obsolescence (sub-optimal design in light of current technologies or tastes), and economic obsolescence (poor location or radically diminished demand for the product).
Economic life	The period of time during which a given building or other improvement to a property is expected to contribute (positively) to the value of the total property. This period is typically shorter than the period during which the improvement could be left on the

	property, that is, its physical life.
Economic/External obsolescence	Loss in value to the improvements (relative to the cost of replacing the improvements with one of equal utility) that stems from factors external to the property.
Effective age	The typical age of a structure equivalent to the one in question with respect to its utility and condition. Knowing the effective age of an old rehabilitated structure of a building with substantial deferred maintenance is generally more informative than knowing its chronological age.
Equity	(1) The degree to which assessments bear a constant relationship to market value. Measures include the coefficient of dispersion and the coefficient of variation. (2) The net value of a property after liens and other charges have been subtracted. <i>See also</i> horizontal inequity and vertical inequity.
Fixed costs	Costs of fixed resources used by a firm that do not vary with production levels and cannot be changed in the short run.
Functional obsolescence	A flaw in the structure, materials or design that diminishes the function, utility and value of the improvement.
Functional utility	The ability of the property or building to be useful and to perform the function for which it is intended according to current market tastes and standards, the efficiency of building's use in terms of architectural style, design and layout, traffic patterns and size and type of buildings.
Highest and Best Use	The reasonably probable and legal use of vacant land on improved property that is physically possible, appropriately supported, and financially feasible that results in the highest value.
Long-lived items	Building components with an expected remaining economic life that is the same as the remaining economic life of the entire structure.

Marginal utility	The change in total utility to a customer that results from a one-unit change in the consumption level of an item.
Market extraction method	Method of estimating depreciation which relies on the availability of comparable sales from which depreciation can be extracted.
Market value	The most probable sale price of a property in terms of money in a competitive and open market, assuming that the buyer and seller are acting prudently and knowledgeably, allowing sufficient time for the sale, and assuming that the transaction is not affected by undue pressures. See Current Value Assessment
Obsolescence	One cause of depreciation, an impairment of desirability and usefulness caused by new inventions, changes in design, improved processes for production or external factors that make a property less desirable and valuable for continuing use. It may be either functional or external.
Remaining economic life	The number of years remaining in the economic life of a building or other improvement as of the date of the appraisal. This period is influenced by the attitudes of market participants and by market reactions to competitive properties on the market.
Replacement cost	The cost, including material, labour, and overhead, that would be incurred in constructing an improvement having the same utility to its owner as the improvement in question, without necessarily reproducing any particular characteristic of the property.
Reproduction costs	The cost, including material, labor, and overhead, that would be incurred in constructing an improvement having exactly the same characteristics as the improvements in question.
Short-lived items	A building component with an expected remaining economic life that is shorter than the remaining economic life of the entire structure.

Special purpose property	A limited market property with a unique physical design, special construction materials, or a layout that restricts its utility to the use for which it was built, also called special design property.
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