

STANDARD 5: MASS APPRAISAL, DEVELOPMENT

In developing a mass appraisal, an appraiser must identify the problem to be solved, determine the scope of work necessary to solve the problem, and correctly complete research and analyses necessary to produce a credible mass appraisal.

Comment: STANDARD 5 applies to all mass appraisals of real or personal property regardless of the purpose or use of such appraisals.⁵⁶ The reporting and jurisdictional exceptions applicable to public mass appraisals prepared for ad valorem taxation do not apply to mass appraisals prepared for other purposes.

A mass appraisal includes:

1. Identifying properties to be appraised;
2. Defining market area of consistent behavior that applies to properties;
3. Identifying characteristics (supply and demand) that affect the creation of value in that market area;
4. Developing a model structure that reflects the relationship among the characteristics affecting value in the market area;
5. Calibrating the model structure to determine the contribution of the individual characteristics affecting value;
6. Applying the conclusions reflected in the model to the characteristics of the property(ies) being appraised; and
7. Reviewing the mass appraisal results.

The JURISDICTIONAL EXCEPTION RULE may apply to several sections of STANDARD 5 because ad valorem tax administration is subject to various state, county, and municipal laws.

STANDARDS RULE 5-1, GENERAL DEVELOPMENT REQUIREMENTS

In developing a mass appraisal, an appraiser must:

- (a) Be aware of, understand, and correctly employ those recognized methods and techniques necessary to produce a credible mass appraisal;**

Comment: Mass appraisal provides for a systematic approach and uniform application of appraisal methods and techniques to obtain estimates of value that allow for statistical review and analysis of results.

This requirement recognizes that the principle of change continues to affect the manner, in which, appraisers perform mass appraisals. Changes and developments in the real property and personal property fields have a substantial impact on the appraisal profession.

To keep abreast of these changes and developments, the appraisal profession is constantly reviewing and revising appraisal methods and techniques and devising new methods and techniques to meet new circumstances. For this reason, it is not sufficient for appraisers to simply maintain the skills and the knowledge they possess when they become appraisers. Each appraiser must continuously improve his or her skills to remain proficient in mass appraisal.

- (b) No commit a substantial error of omission or commission that significantly affects a mass appraisal; and**

Comment: An appraiser must use sufficient care to avoid errors that would significantly affect his or her opinions and conclusions. Diligence is required to identify and analyze the factors, conditions, data, and other information that would have significant effect on the credibility of the assignment results.

- (c) No render a mass appraisal in a careless or negligent manner.**

⁵⁶ See Advisory Opinion 32, *Ad Valorem Property Tax Appraisal and Mass Appraisal Assignments*

STANDARDS RULE 5-2, PROBLEM IDENTIFICATION

In developing a mass appraisal, an appraiser must:

(a) Identify the client and other intended users;⁵⁷

Comment: In ad valorem mass appraisal, the assessor, or party responsible for certification of the assessment or tax roll is required to apply the relevant law or statute and identify the clients and other intended users (if any).

(b) Identify the intended use of the appraisal;

Comment: An appraiser must not allow the intended use of an assignment or a client's objective to cause the assignment results to be biased.

(c) Identify the type and definition of value, and ascertain whether the value is to be the most probable price:

- (i) In terms of cash; or**
- (ii) In terms of financial arrangements equivalent to cash; or**
- (iii) In such other terms as may be precisely defined; and**
- (iv) If the opinion of value is to be based on non-market financing or financing with unusual conditions or incentives, identify the terms of such financing and other influences on value**

(d) Identify the effective date of the appraisal;⁵⁸

(e) Identify, from sources the appraiser reasonably believes to be reliable, the characteristics of the properties that are relevant to the type and definition of value and intended use,⁵⁹ including:

- (i) The group with which a property is identified according to similar market influence;**
- (ii) The appropriate market area and time frame relative to the property being valued; and**
- (iii) Their location and physical, legal, and economic characteristics;**

Comment: the properties must be identified in general terms, and each individual property in the universe must be identified, with the information on its identity stored or referenced in its property record.

When appraising proposed improvements, an appraiser must examine and have available for future examination, plans, specifications, or other documentation sufficient to identify the extent and character of the proposed improvements.⁶⁰

Ordinarily, proposed improvements are not appraised for ad valorem tax purposes. Appraisers, however, are sometimes asked to provide opinions of value of proposed improvements a=so that developers can estimate future property tax burdens. Sometimes units in condominiums and planned unit developments are sold with an interest in un-built community property, the pro rata value of which, if any, must be considered in the analysis of sales data.

(f) Identify the characteristics of the market that are relevant to the purpose and intended use of the mass appraisal including:

- (i) Location of the market area;**
- (ii) Physical, legal, and economic characteristics;**
- (iii) Time frame of market activity; and**
- (iv) Property interests reflected in the market;**

⁵⁷ See Advisory Opinion 36, *Identification and Disclosure of Client, Intended Use, and Intended Users*. Also applicable to Standards Rule 5-2(b).

⁵⁸ See Advisory Opinion 34, *Retrospective and Prospective Value Opinions*.

⁵⁹ See Advisory Opinion 23, *Identifying the Relevant Characteristics of the Subject Property of a Real Property Appraisal Assignment*, if applicable.

⁶⁰ See Advisory Opinion 17, *Appraisals of Real Property with Proposed Improvements*, if applicable.

- (g) **In appraising real property or personal property:**
 - (i) identify the appropriate market area and time frame relative to the property being valued;
 - (ii) when the subject is real property, identify and consider any personal property, trade fixtures, or intangible assets that are not real property but are included in the appraisal;
 - (iii) when the subject is personal property, identify and consider any real property or intangible assets that are not personal property but are included in the appraisal;
 - (iv) identify known easements, restrictions, encumbrances, leases, reservations, covenants, contracts, declarations, special assessments, ordinances, or other items of similar nature; and
 - (v) identify and analyze whether an appraised fractional interest, physical segment or partial holding contributes pro rata to the value of the whole;

Comment: The above requirements do not obligate the appraiser to value the whole when the subject of the appraisal is a fractional interest, physical segment, or a partial holding. However, if the value of the whole is not identified, the appraisal must clearly reflect that the value of the property being appraised cannot be used to develop the value opinion of the whole by mathematical extension.

- (h) analyze the economic conditions at the time of the valuation, including market acceptability of the property and supply, demand, scarcity, or rarity;
- (i) identify any extraordinary assumptions necessary in the assignment. An extraordinary assumption may be used in an assignment only if:
 - (i) the extraordinary assumption is required to properly develop credible opinions and conclusions;
 - (ii) the appraiser has a reasonable basis for extraordinary assumption;
 - (iii) use of the extraordinary assumption results in a credible analysis;
- (j) identify any hypothetical conditions necessary in the assignment. A hypothetical condition may be used in an assignment only if:
 - (i) use of the hypothetical condition is clearly required for legal purposes, for purposes of reasonable analysis, or for purposes of comparison; and
 - (ii) use of the hypothetical condition results in a credible analysis; and
- (k) determine the scope of work necessary to produce credible assignment results in accordance with the SCOPE OF WORK RULE.⁶¹

STANDARDS RULE 5-3, PROPERTY'S USE AND APPROPRIATE MARKET

When necessary for credible assignment results, an appraiser must:

- (a) in appraising real property, identify and analyze the effect on use and value of the following factors:
 - (i) existing land use regulations;
 - (ii) reasonably probable modifications of such regulations;
 - (iii) economic supply and demand;
 - (iv) the physical adaptability of the real estate;
 - (v) neighborhood trends; and
 - (vi) highest and best use of the real estate; and

Comment: This requirement sets forth a list of factors that affect use and value. In considering neighborhood trends, an appraiser must avoid stereotyped or biased assumptions relating to race, age, color, gender, or national origin or an assumption that race, ethnic, or religious homogeneity is necessary to maximize value in a neighborhood. Further, an appraiser must avoid making an unsupported assumption or premise about neighborhood decline, effective age, and remaining life. In considering highest and best use, an appraiser must develop the concept to the extent required for a proper solution to the appraisal problem.

⁶¹ See Advisory Opinion 28, *Scope of Work Decision, Performance, and Disclosure*, and Advisory Opinion 29, *An Acceptable Scope of Work*.

- (b) In appraising personal property, identify and analyze the effects on use and value of industry trends, value-in-use, and trade level of personal property. Where applicable, analyze the current use and alternative uses to encompass what is profitable, legal, and physically possible, as relevant to the type and definition of value and intended use of the appraisal. Personal property has several measurable marketplaces; therefore, the appraiser must define and analyze the appropriate market consistent with the type and definition of value.

STANDARDS RULE 5-4, APPRAISAL METHODS

In developing a mass appraisal, an appraiser must:

- (a) Identify the appropriate procedures and market information required to perform the appraisal, including all physical, functional, and external market factors as they may affect the appraisal;

Comment: Such efforts customarily include the development of standardized data collection forms, procedures, and training materials that are used uniformly on the universe of properties under consideration.

- (b) Employ recognized techniques for specifying property valuation models; and

Comment: The formal development of a model in a statement or equation is called model specification. Mass appraisers must develop mathematical models that, with reasonable accuracy, represent the relationship between property value and supply and demand factors, as represented by quantitative and qualitative property characteristics. The models may be specified using the cost, sales comparison, or income approaches to value. The specification format may be tabular, mathematical, linear, nonlinear, or any other structure suitable for representing the observable property characteristics. Appropriate approaches must be used in appraising a class of properties. The concept of recognized techniques applies to both real and personal property valuation models.

- (c) Employ recognized techniques for calibrating mass appraisal models.

Comments: Calibration refers to the process of analyzing sets of property and market data to determine the specific parameters of a model. The table entries in a cost manual are examples of calibrated parameters, as well as the coefficients in a linear and nonlinear model. Models must be calibrated using recognized techniques, including, but not limited to, multiple linear regression, nonlinear regression, and adaptive estimation.

STANDARDS RULE 5-5, APPROACHES TO VALUE

In developing a mass appraisal, when necessary for credible assignment results, an appraiser must:

- (a) Collect, verify, and analyze such data as are necessary and appropriate to develop:
- (i) The cost new of the improvement;
 - (ii) Depreciation;
 - (iii) Value of the land by sales of comparable properties;
 - (iv) Value of the property by sales of comparable properties;
 - (v) Value by capitalization of income or potential earnings (i.e., rentals, expenses, interest rates, capitalization rates, and vacancy data);

Comment: This Standards Rule requires appraisers engaged in mass appraisal to take reasonable steps to ensure that the quantity and quality of the factual data that are collected are sufficient to produce credible mass appraisals.

- (b) **Base estimates of capitalization rates and projections of future rental rates and/or potential earnings capacity, expenses, interest rates, and vacancy rates on reasonable and appropriate evidence,**⁶²

Comment: This requirement calls for an appraiser, in developing income and expense statements and cash flow projections, to weigh historical information and trends, current market factors affecting such trends, and reasonably anticipated events, such as competition from developments either planned or under construction.

- (c) **Identify and, as applicable, analyze terms and conditions of any available leases; and**
(d) **Identify the need for and extent of any physical inspection.**⁶³

STANDARDS RULE 5-6, CALIBRATED MASS APPRAISAL MODEL APPLICATION

When necessary for credible assignment results in applying a calibrated mass appraisal model an appraiser must:

- (a) **Value improved parcels by recognized methods or techniques based on the cost approach, the sales comparison approach, and income approach;**
(b) **Value sites by recognized methods or techniques; such techniques include but are not limited to the sales comparison approach, allocation method, abstraction method, capitalization of ground rent, and land residual technique;**
(c) **When developing the value of a leased fee estate or a leasehold estate, analyze the effect on value, if any, of the terms and conditions of the lease;**

Comment: In ad valorem taxation the appraiser may be required by rules or law to appraise the property as if in fee simple, as though unencumbered by existing leases. In such cases, market rent would be used in appraisal, ignoring the effect of the individual, actual contract rents.

- (d) **Analyze the effect on value, if any, of the assemblage of the various parcels, divided interests, or component parts of a property; the value of the whole must not be developed by adding together the individual values of the various parcels, divided interests, or component parts; and**

Comment: Although the value of the whole may be equal to the sum of the separate estates or parts, it also may be greater than or less than the sum of such estates or parts.

- (e) **When analyzing anticipated public or private improvements, located on or off the site, analyze the effect on value, if any, of such anticipated improvements to the extent they are reflected in market actions.**

STANDARDS RULE 5-7, RECONCILIATION

In developing a mass appraisal an appraiser must:

- (a) **Reconcile the quality and quantity of data available and analyzed within the approaches used and the applicability and relevance of the approaches, methods and techniques used; and**
(b) **Employ recognized mass appraisal testing procedures and techniques to ensure that standards of accuracy are maintained.**

Comment: It is implicit in mass appraisal that, even when properly specified and calibrated mass appraisal models are used, some individual value conclusions will not meet standards or reasonableness, consistency, and accuracy. However, appraisers engaged in mass appraisal have a professional responsibility to ensure that, on an overall basis, models produce value conclusions that meet attainable standards of accuracy. This responsibility requires appraisers to evaluate the performance of models, using techniques that may include but are not limited to, goodness-of-fit statistics, and model performance statistics such as appraisal-to-sale ratio studies, evaluation of hold-out samples, or analysis of residuals.

⁶² See Advisory Opinion 33, *Discounted Cash Flow Analysis*.

⁶³ See Advisory Opinion 2, *Inspection of Subject Property*.

STANDARD 6: MASS APPRAISAL, REPORTING

In reporting the results of a mass appraisal, an appraiser must communicate each analysis, opinion, and conclusion in a manner that is not misleading.

Comment: STANDARD 6 addresses the content and level of information required in a report that communicates the results of a mass appraisal. STANDARD 6 does not dictate the form, format, or style of mass appraisal reports. The substantive content of a report determines its compliance.

Standards Rule 6-1, GENERAL REPORTING REQUIREMENTS

Each written report of a mass appraisal must:

- (a) Clearly and accurately set forth the appraisal in a manner that will not be misleading;**
- (b) Contain sufficient information to enable the intended user(s) of the appraisal to understand the report properly; and**

Comment: Documentation for a mass appraisal for ad valorem taxation may be in the form of (1) property records, (2) sales ratios and other statistical studies, (3) appraisal manuals and documentation, (4) market studies, (5) model building documentation, (6) regulations, (7) statutes, and (8) other acceptable forms.

- (c) Clearly and accurately disclose all assumptions, extraordinary assumptions, hypothetical conditions, and limiting conditions used in the assignment.**

Standards Rule 6-2, CONTENT OF A MASS APPRAISAL REPORT

The content of a mass appraisal report must be appropriate for the intended use of the appraisal and, at a minimum:

- (a) state the identity of the client, or if the client has requested anonymity, state that the identity is withheld at the client's request but is retained in the appraisers workfile; state the identity of any intended user(s) by name or type;⁶⁴**

Comment: Because the client is an intended user, they must be identified in the report as such. However, if the client has requested anonymity the appraiser must use care when identifying the client to avoid violations of the Confidentiality section of the ETHICS RULE.

- (b) state the intended use of the appraisal;**
- (c) disclose any assumptions or limiting conditions that result in deviation from recognized methods and techniques or that affect analyses, opinions, and conclusions;**
- (d) state the effective date of the appraisal and the date of the report;**

Comment: In ad valorem taxation the effective date of the appraisal may be prescribed by law. If no effective date is prescribed by law, the effective date of the appraisal, if not stated, is presumed to be contemporaneous with the data and appraisal conclusions.⁶⁵

- (e) state the type and definition of value and cite the source of the definition;**

Comment: stating the type and definition of value also requires any comments needed to clearly indicate to intended users how the definition is being applied.

⁶⁴ See Advisory opinion 36, Identification and Disclosure of Client, Intended Use, and Intended Users. Also applicable to Standards Rules 6-2(b).

⁶⁵ See Advisory Opinion 34, Retrospective and Prospective Value Opinions.

When reporting an opinion of value, state whether the opinion is:

- in terms of cash or of financing terms equivalent to cash; or
- based on non-market financing with unusual conditions or incentives

When an opinion of value is based on non-market financing terms or financing with unusual conditions or incentives, summarize the terms of such financing and any influences on value.

- (f) state the properties appraised including the property rights; and, when the property rights to be appraised are specified in a statute or court ruling, reference the law.**

Comment: The report documents the sources for location, describing and listing the property. When applicable, include references to legal descriptions, addresses, parcel identifiers, photos, and building sketches. In mass appraisal this information is often included in property records.

- (g) summarize the scope of work used to develop the appraisal⁶⁶, and explain the exclusion of the sales comparison approach, cost approach, or income approach.**

Comment: Summarizing the scope of work includes disclosure of research and analyses performed and might also include disclosure of research and analyses not performed.

- (h) when any portion of the work involves significant mass appraisal assistance, summarize the extent of that assistance;⁶⁷**
- (i) summarize and support the model specification(s) considered, data requirements, and the model(s) chosen; provide sufficient information to enable the client and intended users to have confidence that the process and procedures used conform to accepted methods and results in credible value conclusions; and include a summary of the rationale for each model, the calibration techniques to be used, and the performance measures to be used;**

Comment: In the case of mass appraisal for ad valorem taxation, stability and accuracy are important to the credibility of value opinions.

- (j) summarize the procedure for collecting, validating, and reporting data; and summarize the sources of data and the data collection and validation processes;**

Comment: Reference to detailed data collection manuals or electronic records must be made, as appropriate, including where they may be found for inspection.

- (k) summarize calibration methods considered and chosen, including the mathematical form of the final model(s); summarize how value conclusions were reviewed; and, if necessary, state the availability and location of individual value conclusions;**
- (l) when an opinion of highest and best use, or the appropriate market or market level was developed, summarize how that opinion was determined, and reference case law, statute, or public policy that describes highest and best use requirements;**

Comment: When actual use is the requirement, the report must summarize how use-value opinions were developed. The appraiser's reasoning in support of the highest and best use opinion must be provided in the depth and detail required by its significance to the appraisal.

- (m) identify the appraisal performance tests used and the performance measures attained;**
- (n) summarize the reconciliation performed, in accordance with Standards Rule 5-7; and**
- (o) include a signed certification in accordance with Standards Rule 6-3.**

⁶⁶ See Advisory Opinion 28, *Scope of Work Decision, Performance, and Disclosure* and Advisory Opinion 29, *An Acceptable Scope of Work*

⁶⁷ See Advisory Opinion 31, *Assignments Involving More than One Appraiser*.

Standards Rule 6-3, CERTIFICATION

A signed certification is an integral part of the appraisal report.

- (a) The wording of a certification does not have to match the following verbatim, but each of the elements must be addressed:

I certify that, to the best of my knowledge and belief:

- The statements of fact contained in this report are true and correct.
- The reported analyses, opinions, and conclusions are limited only by the reported assumptions and limiting conditions, and are my personal, impartial, and unbiased professional analyses, opinions, and conclusions.
- I have no (or the specified) present or prospective interest in the property that is the subject of this report, and no (or the specified) personal interest with respect to the parties involved.
- I have performed no (or the specified) services, as an appraiser or in any other capacity, regarding the property that is the subject of this report within the three-year period immediately preceding the agreement to perform this assignment.
- I have no bias with respect to the property that is the subject of this report or to the parties involved with this assignment.
- My engagement in this assignment was not contingent upon developing or reporting predetermined results.
- My compensation for completing this assignment is not contingent upon the reporting of a predetermined value or direction in value that favors the cause of the client, the amount of the value opinion, the attainment of the stipulated result, or the occurrence of the subsequent event directly related to the intended use of this appraisal.
- My analyses, opinions, and conclusions were developed, and this report has been prepared in conformity with the *Uniform Standards of Professional Appraisal Practice*.
- I have (or have not) made a personal inspection of the properties that are the subject of this report. (If more than one person signs this certification, the certification must clearly specify which individuals did and which individuals did not make a personal inspection of the appraised property.)⁶⁸
No one provided significant mass appraisal assistance to the person signing this certification. (if there are exceptions, the name of each individual providing significant mass appraisal assistance must be stated.)⁶⁹

Comment: The above certification is not intended to disturb an elected or appointed assessor's work plans or oaths of office.

- (b) An appraiser who signs any part of the appraisal report, including a letter of transmittal, must also sign a certification.

Comment: In an assignment that includes only assignment results developed by the real property appraiser, any appraiser who signs a certification accepts full responsibility for all elements of the certification, for the assignment results, and for the contents of the appraisal report. In an assignment that includes personal property assignment results not developed by the real property appraiser(s), any real property appraiser who signs a certification accepts full responsibility for the real property elements of the certification, for the real property assignment results, and for the real property contents of the appraisal report.

In an assignment that includes only assignment results developed by the personal property appraiser(s), any appraiser who signs a certification accepts full responsibility for all elements of the certification, for the assignment results, and for the contents of the appraisal report. In an assignment that includes real property assignment results not developed by the personal property appraiser(s), any personal property appraiser who signs a certification accepts full responsibility for the personal property elements of the certification, for the personal property assignment results, and for the personal property contents of the appraisal report.

⁶⁸ See Advisory Opinion 2, *Inspection of Subject Property*.

⁶⁹ See Advisory Opinion 31, *Assignments Involving More than One Appraiser*.

- (c) **When a signing appraiser has relied on work done by appraisers and others who do not sign the certification, the signing appraiser is responsible for the decision to rely on their work.**
- (i) **The signing appraiser is required to have a reasonable basis for believing that those individuals performing the work are competent; and**
 - (ii) **The signing appraiser must have no reason to doubt that the work of those individuals is credible.**

Comment: Although a certification must contain the names of individuals providing significant mass appraisal assistance, it is not required that a summary of the extent of their assistance be located in a certification. This disclosure may be in any part(s) of the report.