



2015 – 2020 MONTANA REAPPRAISAL PLAN

Montana Department of Revenue



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I. EXECUTIVE SUMMARY

In 1972, Montana citizens amended the Constitution. The new Constitution included Article 8, Section 3, which requires the state to “appraise, assess, and equalize the valuation of all property which is to be taxed in the manner provided by law.” It also included Article 8, Section 4, which requires equality in property valuation. Section 4 states, “all taxing jurisdictions shall use the assessed valuation of property established by the state.”

Prior to the 1972 Constitutional amendments, county governments were responsible for the valuing all taxable property in their county, assessing the property, issuing tax bills, and collecting taxes. The Constitutional revision moved the valuation and assessment functions to the state but left the tax billing, and tax collection with the local county governments. As a result, the Montana Department of Revenue Property Assessment Division (department) values and assesses all class three agricultural property, class four commercial, residential and industrial properties and class ten forest land once every six years. The department also certifies property values to each county. Counties set their budgets and determine mill levies based on the certified values.

Montana law requires the department to adopt a comprehensive written reappraisal plan by rule each reappraisal cycle. The reappraisal plan must provide that all class three, four, and ten property in each county is revalued on January 1, 2014, effective for January 1, 2015. (If a property’s value increases as the result of cyclical reappraisal, the increase in value must be phased in by 16.66% each year of the reappraisal cycle. § 15-7-111(5), MCA.)

II. INTRODUCTION

The 2015-2020 Montana Reappraisal Plan defines the 2015-2020 reappraisal cycle and identifies the reappraisal plan, appraisal theory, mass appraisal process, data collection, valuation methodologies, planning and organization, analysis of resources, and informal assessment review and appeals process.

III. GENERAL REAPPRAISAL PLAN

Reappraisal Cycle and Valuation Date

The 2015-2020 reappraisal cycle begins January 1, 2015. However the property values for that cycle are established as of January 1, 2014. This date is commonly referred to as the “valuation date” or “lien date.” All class three, four and ten property will be valued as of the valuation date. Once established, a property’s value will not change during the reappraisal cycle unless there is a change in the physical attributes of the property.

Market Value

When the department appraises property, it must appraise it at 100% of its market value as of the valuation date. Market value is “the value at which property would change hands between a willing buyer and a willing seller, neither being under any compulsion to buy or to sell and both having reasonable knowledge of the relevant facts.” §15-8-111(1)-(2)(a), MCA.

Mass Appraisal Standard

The department reappraises property by conducting a “Mass Appraisal” in accordance with standard six of the Uniform Standards of Appraisal Practice. The department accomplishes this through the development of valuation models using statistical testing and standardized procedures.

Assessment Notices

The department is required to mail assessment notices to all property taxpayers by August, 2015. Assessment notices identify the appraised value(s) of a taxpayer’s property. The value(s) identified on the assessment notice is the value that the department will submit to the county treasurers for tax billing. County treasurers will mail the property tax bills by November 1, 2015, and, the first half of taxes will be due to the County Treasurer by November 30, 2015.

Property taxpayers may dispute the appraised value of their property by submitting a request for an informal review with their local Department of Revenue office or by filing a formal appeal with the taxpayer's local County Tax Appeal Board.

IV. REAPPRAISAL PROCEDURE

The department, by approval of the 2015-2020 Reappraisal Plan, is complying with applicable law. The first year of the reappraisal cycle, tax year 2015, all taxable property in classes three, four and ten will be reappraised. The six-year reappraisal cycle will end December 31, 2020.

A. Reappraisal Activities

1. Identification of Economic Areas

All 56 counties in the state are separated into particular groups according to market activity. See Exhibit A.

2. Sales Verification and Trending Sales to Valuation Date

Staff collects, verifies, and analyzes sales from the end of the prior cycle through the valuation date of the current cycle. All sales are time trended to the valuation date of January 1, 2014, regardless of the sale date. PAD contracted with international renowned experts, *Almy, Gouldemans, Jacobs and Denne*, Property Taxation and Assessment Consultants, to conduct the time sales trends of the sales collected.

3. Construction Costs Updated

Staff collects construction cost data from local sources. If limited data is available locally, the department may utilize data from nationally accepted construction cost manuals such as Marshall & Swift and RSMeans. The statewide construction costs represent average construction cost levels in the state. The statewide construction costs are adjusted using a local index and economic condition factors to reflect local market construction costs for locales throughout the state.

4. Land Valuation Models

Land models are built from the vacant land sales and reflect the market values of land in particular neighborhoods selling with similar characteristics, i.e., size, location, topography.

5. Residential Market Models

Market models are built using multiple regression analysis from the sales collected. After determining the primary property characteristics driving the property sale and the

weight those characteristics have on the property sale, comparable sales with characteristics similar to each subject property are used to value residential properties.

6. Commercial Income Models

Income models are built using income and expense data reported by commercial property owners and an analysis of the independent variables that affect gross income. These variables include, but are not limited to, types of property, and the quality, condition, location of the property.

7. Final Determination of Values

During the reappraisal process, appraisers will consider each applicable approach to value for a given property. The appraiser will then determine which of those methods results in a value that is most representative of the true market value of the property.

8. Assessment Notices

In the first year of each reappraisal cycle, assessment notices are mailed to all property owners or purchasers under contract for deed. In years 2 thru 6 of the appraisal cycle, Montana law states that the department shall mail to each property owner or purchaser under contract for deed an assessment notice only if there has been a change in ownership, classification, valuation, or the addition or subtraction of personal property affixed to the land, since the last notice was sent.

The purpose of the assessment notice is to inform taxpayers of the market value and taxable value of their property for property tax purposes. Taxpayers have 30 days from the date on the notice to dispute their property valuation or classification for the current tax year or the first Monday in June, whichever is later. Taxpayers have the right to request an informal assessment review and/or file a formal appeal at the county and state level at any time but only once each appraisal cycle.

The Montana Legislature has an opportunity to mitigate the impact of the new reappraised values in the first year of the cycle. However, the legislative session does not end until April 2015. The department is required to implement the legislative mitigation strategies prior to mailing assessment notices which may delay the department's mailing of assessment notices for tax year 2015.

9. Informal Reviews and Appeals – See Section XIII.

10. Certification of Values

The department is responsible for annually certifying all taxable real and personal property to all taxing jurisdictions by the 1st Monday in August.

B. Reappraisal Classes

1. *Class Three – Agricultural Property.*

The market value of agricultural land is based on the productivity of the land. Agricultural property will be placed in one of five sub-classes within Class three: grazing land, tillable irrigated land, continuously cropped non-irrigated hay land, non-irrigated summer fallow farmland, or non-irrigated farmland. Each sub-class of property has different productivities. A given parcel of property may be more or less productive than the average property in the class.

Class three land also includes non-productive mining claims and non-qualified agricultural land. Non-productive mining claims and non-qualified agricultural land are valued based upon the statewide average productivity value of grazing land. Parcels of land between 20 and 160 acres, which cannot meet the productivity, use and/or \$1500 of income to be valued as agricultural are considered non-qualified agricultural land.

2. *Class Four – Residential, Commercial, and Industrial Property.*

Class four is the largest class of property in the state, as measured in both market value and the number of parcels. Class four property includes all residential, commercial, and industrial land and improvements. Property in this class is assessed at 100 percent of its market value.

3. *Class Ten - Forest Lands.*

The value of forestland is determined by the productivity of each parcel of land, expressed as cubic feet of lumber produced on each acre per year. Standing timber on the property is not taxed. The productivity of each acre is determined by the University of Montana, College of Forestry and Conservation, with input from the timber industry.

C. Valuation Manuals and Sources

The 2015-2020 Montana Reappraisal Plan will be used for valuing residential, commercial, and industrial real property. The department validated improved and vacant land sales and contracted with *Almy, Gludemans, Jacobs & Denne* to time trend our improved and vacant land sales to our valuation date. Construction cost manuals, such as, Marshall & Swift and R.S. Means were used with a publication date as close to the valuation date as possible. In addition, the department received productivity data from the US Department of Agriculture (USDA) Natural Resources Conservation Service; and agricultural income and commodity prices from the USDA National Agricultural Statistics Service.

The State of Montana Department of Natural Resource and Conservation provided forest costs and Dr. David Jackson, University of Montana, provided stumpage values for forest lands.

D. Reappraisal Cycles

For the taxable years from January 1, 2009, through December 31, 2014, all properties classified in §§ 15-6-133, 134, and 143, MCA, in accordance with § 15-7-111, MCA, were appraised at the market value as of July 1, 2008.

For the taxable years from January 1, 2015, through December 31, 2020, all properties classified in §§ 15-6-133, 134, and 143, MCA, in accordance with § 15-7-111, MCA, will be appraised at the market value as of January 1, 2014.

V. **APPRAISAL THEORY**

A. Rights and the Principals of Value

An appraisal is an educated opinion or estimate of value. It is the appraiser's responsibility to determine, through the appraisal process, the full market value of the property as of the appraisal date.

B. Bundle of Rights

The terms "real estate" and "real property" are often used interchangeably. Generally speaking, real estate pertains to the real or fixed improvements to the land such as structures and other appurtenances, whereas real property encompasses all the interests, benefits and rights enjoyed by the ownership of the real estate.

Real property ownership involves the Bundle of Rights Theory that asserts the owner has the rights to enter it, use it, sell it, lease it, or give it away, as he/she so chooses. These rights are guaranteed by law, but they are subject to certain governmental and private restrictions.

The governmental restrictions are found in its power to:

- Tax property.
- Take property by condemnation for the benefit of the public, providing that just compensation is made to the owner (Eminent Domain).
- Police property by enforcing any regulations deemed necessary to promote the safety, health, morals and general welfare of the public.
- Provide for the reversion of ownership to the state in cases where a competent heir to the property cannot be ascertained (Escheat).

Private restrictions imposed upon property are often in the form of agreements incorporated into the deed. The deed also defines the rights in the total bundle of rights the buyer is acquiring. Since value is related to each of these rights, the appraiser should know precisely which rights are involved in his/her appraisal.

Appraisals for Ad Valorem tax purposes generally assume the property is owned in “Fee Simple,” meaning that the total bundle of rights is considered to be intact.

C. The Nature and Meaning of Value

For Ad Valorem Tax purposes, the value sought is market value. The descriptive term “market” indicates the activity of buyers and sellers. Market value is the price which an informed and intelligent buyer, fully aware of the existence of competing properties, and not being compelled to act, would pay for a particular property.

D. Value in Use vs. Value in Exchange

A property is said to have value in use when no market value exists. The value in use refers to the actual value of a commodity to a specific person, as opposed to value in exchange. Value in exchange generally refers to the dollar value of a commodity to buyers.

E. The Principle of Supply and Demand

Supply and demand are impacted by population growth, new techniques in transportation, purchasing power, price levels, wage rates, taxation, governmental controls, and scarcity. For example, a sudden population growth in an area will create an increase in demand for housing. If the demand increases at a higher rate than the supply property values typically increase. As the supply is increased demand begins to taper off and property values typically decrease. Balance is reached when supply and demand are similar. When supply and demand are balanced, property values are typically stable.

F. The Principle of Highest and Best Use

The highest and best use for a property is the use that will produce the highest net return to the land for a given period of time within the limits of those uses which are economically feasible, probable, and legally permissible. In mass appraisal, the current highest and best use is usually considered to be the current use, that is, buildings will not be immediately demolished or replaced.

However, this does not lessen the need to evaluate long-run highest and best use for different groups of property before reappraisal. The department may also be required to value based upon current use, known as value in use, due to statutory requirements.

G. The Principle of Change

The impact of change on the value of real property demonstrated in the life cycle of a neighborhood. These cycles are characterized by three stages of evolution: development and growth evidenced by improving values; leveling off evidenced by static values; and finally, decay evidenced by declining values.

H. The Principle of Substitution

Value is created by people in the market place. It is the function of translating demand into a commodity of exchange. When the benefits and advantages derived from two properties are equal, the lowest priced property receives the greatest demand. The informed buyer is not justified in paying anything more for a property than it would cost to acquire an equally desirable property. That is to say that the value of a property is established as that amount for which equally desirable comparable properties are being bought and sold in the market. This is the concept in determining property values and the basis of the valuation process.

VI. MASS APPRAISAL SYSTEM

Mass appraisal is the systematic appraisal of groups of properties as of a given date using standardized procedures and statistical testing.

The prime objective of mass appraisals for tax purposes is to equalize property values. The value of one residential property must be equalized with another, and it must also be equalized within the political unit. The job of the appraiser is to arrive at a reasonable estimate. To accomplish this, the coordination of approaches to the valuation of the various classes of property must be made so that they are related to another in such a way as to reflect the motives of the prospective purchasers of each type of property.

A prospective purchaser of a residential property is primarily interested in its capacity to render service to the family as a place to live. Its location, size, quality, design, age, condition, desirability and usefulness are the primary factors to be considered in making a selection. By relying heavily upon powers of observation and inherent intelligence, knowing what is available; one property will eventually stand out to be more appealing than another. Thus, it is likewise the job of the appraisers to evaluate the relative degree of appeal of one property to another for tax purposes.

The residential appraiser must rely heavily upon the sales comparison approach to value by analyzing the selling prices of comparable properties and considering the very same factors of location, size, quality, design, age, condition, desirability, and usefulness which were considered by the buyer.

The prospective purchaser of commercial property is primarily interested in the potential net return and tax shelter the property will provide. That price which is justified to pay for the property is a measure of the prospects for a net return from the investment. Real estate, as an investment then, must not only compete with other real estate, but also with stocks, bonds, annuities, and other similar investment areas. The commercial appraiser must explore the rental market and compare the income producing capabilities of one property to another. The commercial appraiser will find that since commercial property is not bought and sold as frequently as is residential property, the sales market cannot be easily established. Consequently, relying heavily on the income approach to value will require that the net economic rent, for which the property is capable of yielding, must be determined. The amount of investment required to effect that net return at a rate commensurate with that normally expected by investors must also be determined. This can only be achieved through a comprehensive study of the income producing capabilities of comparable properties and an analysis of present day investment practices.

The prospective purchaser of agricultural property will be motivated somewhat differently. The primary interest will be in the productive capabilities of the land. It is reasonable to assume that the purchaser will be familiar, at least generally, with the productive capacity of the farmer's land. An agricultural appraiser must rely heavily upon production information from average management practices.

The prospective purchaser of industrial property is primarily interested in the overall utility value of the property. Of course, in evaluating the overall utility, individual consideration must be given to the land and each improvement on the land. Industrial buildings are generally of special purpose design that cannot readily be separated from the industrial operation for which they were built. As long as the operation remains effective, the building will hold its values; if the operation becomes obsolete, the building will typically become obsolete also. The upper limit of the building's value is its

replacement cost new, and its present day usefulness in relation to the purpose for which it was originally designed.

Industrial appraisers will seldom be able to rely on the market data approach because of the absence of comparable sales.

It is also difficult to rely on the income approach, because of the absence of comparable investments, and the inability to accurately determine the contribution of each unit of production to the overall income produced. Appraisers must, therefore, rely heavily on the cost approach to value and an appraiser must determine the upper limit or replacement cost new of each improvement and the subsequent loss of value resulting overall from physical, functional, and economic factors.

Any effective approach to valuation must reflect buyers' motives in the market place. Motives influencing prospective buyers tend to differ depending upon the type of property involved. For that reason, an appraiser's approach to value must differ accordingly.

The fact that there are different approaches to value, some of which are more applicable to one type of property than to another, does not, by any means, preclude equalization between property types. The objective in each approach is to arrive at a price that an informed and intelligent person, fully aware of the existence of competing properties and not being compelled to act, is justified in paying for any one particular property. Underlying and fundamental to each of the approaches is the comparison process. Regardless of whether the principal criteria are actual selling prices, income producing capabilities, or functional usefulness, like properties must be treated alike. The primary objective is equalization. The various approaches to value, although valid in themselves, must nevertheless be coordinated to produce values that are not only valid and accurate, but are also equitable. The same "yardstick" of value must be applied to all properties, and must be applied by systematic and uniform procedures.

Sales on all properties are not required to effectively apply the market data approach. The same is true regarding any other approach. A comprehensive record of all the significant physical and economic characteristics of each property is required to compare the properties of "unknown" values with the properties of "known" values. All significant differences between properties must in some measure, either positively or negatively, be reflected in the final estimate of value.

Each property must be given individual treatment, but the treatment must be uniform and standardized, and essentially no different than that given to any other property. All the factors affecting value must be analyzed and evaluated for each and every property

within the entire political unit. By doing this, between individual properties and between types of properties can be achieved.

This is a general explanation of the equalization process underlying the entire Mass Appraisal Program. The program itself consists of various operational phases.

Its success depends primarily upon the systematic coordination of collecting and recording data, analyzing the data, and processing the data to an indication of value.

VII. DATA COLLECTION

The collection and recording of pertinent data is the foundation of the appraisal process. The data should include general supporting data, neighborhood data, and property specific data. General data are those which are necessary to develop the elements essential to the valuation process overall. Neighborhood data are those that relate to pre-delineated neighborhood units. Specific property data is the information compiled for each parcel of property. An appraiser will use this data to reach an estimate of value using the cost, market and/or income approach.

The data must be comprehensive enough to allow an appraiser to adequately consider all factors that significantly affect property values. In keeping with the economics of a mass appraisal program, it is costly and impractical to collect, maintain, and process data of no or marginal contribution to the desired objectives.

Appraisers are primarily concerned with cost, and sales and income data, but they will also find it necessary to research and compile general socioeconomic information pertaining to the entire political unit that may influence values. This information may assist an appraiser during the analytical phase of the operation and should include, but is not necessarily limited to, population trends, prevailing geographical factors, primary transportation facilities, primary income sources, unemployment and income levels, institutional influences, the annual volume of new construction and ownership transfers, availability of vacant land, construction labor and material costs, preponderance of residential rentals, and the amount of residential vacancies.

A. Sales Data

Sales data must be sufficient enough to provide a representative sampling of comparable sales needed to apply the market data approach, to derive unit land values and depreciation indicators needed to apply the cost approach, and to derive gross rent multipliers and elements of the capitalization rate needed to apply the income approach.

All sales data should include the parcel identification number, property classification code, month and year of sale, selling price, source of information, i.e., buyer, seller, agent, or fee, and a reliable judgment as to whether or not the sale is representative of a true arm's-length transaction.

Sales data should be recorded on a standard form used to record specific property data, and verified during the property-listing phase.

The principle source for obtaining sales data in Montana is from realty transfer certificates. Other sources may include multiple listing services, developers, realtors, lending institutions, and individual owners during the listing phase of the operation.

At the earliest time possible during the data collection phase of the operation, and after a thorough consideration of the living environment and economic characteristics of the overall county, or any political subdivision thereof, the appraisal staff should delineate the larger jurisdictions into smaller "neighborhood units," each exhibiting a high degree of homogeneity in residential amenities, land use, economic trends and housing characteristics such as structural quality, age, and condition. The neighborhood delineations should be outlined on an index or map and each should be assigned a neighborhood identification code, which when combined with the parcel identification numbering system, will serve to uniquely identify it from other neighborhoods.

Neighborhood data must be comprehensive enough to permit an appraiser to adequately consider all factors that influence value and to determine the variations in selling prices and income yields attributable to benefits arising from the location of one specific property as compared to another. The data should also include; the taxing district; the school district; the neighborhood identification code; special reasons for delineation (other than obvious physical and economic boundaries); the neighborhood characteristics such as the type (urban, suburban, etc.); trends (whether it is declining, improving, or relatively stable); accessibility to the central business district, shopping centers, interstate highways and primary transportation terminals; housing characteristics, (the estimated range of selling prices for residentially improved properties, and a rating of its relative durability).

Specific property data must be comprehensive enough to provide the data base needed to process each parcel of property to an indication of value, to generate the tax roll and related tax roll requirements, to generate other specified output, and to provide the assessing officials with a permanent record to facilitate maintenance functions and to administer taxpayer assistance and grievance proceedings.

The data should include the parcel identification number, owner name, and mailing address, legal description, property address, property classification code, local zoning

code, neighborhood identification code, site characteristics, and structural characteristics.

All the data should be recorded on a single, specially designed data collection card customized to meet individual assessing needs. Each card should be designed and formatted in such a way as to accommodate the listing of information and to facilitate data processing. In addition to the property data items noted above, space must be provided on the property record card for a building sketch, land and building computations, summarizations, and memoranda. In keeping with the economy and efficiency of a mass appraisal program, the card should be formatted to minimize writing by including a sufficient amount of site and structural descriptive data that can be checked and/or circled.

The descriptive data should be comprehensive enough to be suitable for listing any type of land and improvement data regardless of class, with the possible exception of large industrial, institutional, and utility complexes that require lengthy descriptions. In these cases, it will generally be necessary to use a specially designed supplemental property record document, keyed and indexed to the corresponding property record card. The data collection card should be made a permanent part of the assessing system, and used not only in conjunction with the revaluation, but also to update the property records for subsequent assessments.

B. Cost Data

To apply the cost approach, cost data must be sufficient to develop or select and validate the pricing schedules and cost tables required to compute the replacement cost new of improvements.

All data pertaining to the cost of total buildings in place should include the parcel identification number, property address, date of completion, construction costs, including all direct and indirect costs, name of builder, source of information, structural characteristics, and other information pertinent to analysis. Cost information may be recorded on the same form used to record specific property data.

The principal sources for obtaining cost data are builders and developers, and it is generally advisable to collect cost data in conjunction with new construction reviews.

C. Income and Expense Data

Income and expense data must be sufficient enough to derive capitalization rates and accurate estimates of net income needed to apply the income approach.

Income and expense data should include both general data regarding existing financial attitudes and practices, and specific data regarding the actual incomes and expenses realized by specific properties.

The general data should include such information as equity return expectations, gross rentals, vacancy and operating cost expectations and trends, prevailing property management costs, and prevailing mortgage costs.

Specific data should include the identification number, property address (or building ID), source of information, the amount of equity, the mortgage and lease terms, and an itemized account of the annual gross income, vacancy loss, and operating expenses for the most recent two year period.

The general data should be documented in conjunction with the development of capitalization procedural guidelines. The specific data, since it is often considered confidential and not subject to public access, should be recorded on special forms, designed in such a way as to accommodate the property owner or agent thereof in submitting the required information. The forms should also have space reserved for the appraiser's analysis and calculations.

The principal sources for obtaining the general financial data are investors, lending institutions, and property managers. The primary sources for obtaining specific data are the individual property owners and/or tenants during the listing phase of the operation.

D. Data Processing

This is an analysis of data compiled during the data inventory phase and the processing of that data to an indication of value through the use of the cost, market, and income approaches.

During the analytical phase, it will be necessary to analyze cost, market, and income data in order to provide a basis for validating the appropriate cost schedule and tables required to compute the replacement cost new of all buildings and structures; for establishing comparative unit land values for each type of property; for establishing the appropriate depreciation tables and guidelines for each type of property; and for developing gross rent multipliers, economic rent and operating expense norms, capitalization rate tables and other related standards and norms required to effect the mass appraisal of all the property within an entire political unit on an equitable basis.

After establishing the appropriate standards and norms, the specific data compiled for each property must be analyzed. This is done by giving due consideration to the factors influencing the value of that particular property as compared to another, and then to process the data into an indication of value by employing the techniques described in

the section of the manual dealing with the application of the traditional approaches to value.

Any one, or all three of the approaches, if applied properly, should lead to an indication of market value; of primary concern is applying the approaches on an equitable basis. This may require the coordinated effort of a number of individual appraisers, each appraiser acting as a member of a team, with the team effort directed toward a valid, accurate and equitable appraisal of each property within the political unit. This includes the following activities:

- Verifying of the accuracy of each of the characteristics recorded on the data collection card.
- Determining the proper quality grade and design factor to be applied to each building to account for variations from the base specifications.
- Making a judgment of the overall condition, desirability, and usefulness of each improvement in order to arrive at a sound allowance for depreciation.
- Capitalization of net income capabilities into an indication of value in order to determine the loss of value attributable to functional and economic obsolescence.
- Adding the depreciated value of all improvements to the land value, and reviewing the total property value in relation to the value of comparable properties.
- Determining that the total property value established can be correlated to actual sales of comparable properties.

Once the final values have been established for each property, the entire program should be evaluated in terms of its primary objectives: Do the values approximate a satisfactory level of market value, and more importantly, are the values equitable? Satisfactory answers to these questions can best be obtained through a statistical analysis of recent sales in an appraisal to sale ratio study, if sufficient sales are available.

The techniques and procedures, if applied skillfully, should yield highly accurate and equitable property valuations, and should provide a sound property tax base. It should be noted, however, that no program, regardless of how skillfully administered, can ever be expected to be error free. This appraisal must be fine-tuned and this can best be done by giving the taxpayer an opportunity to question the value placed upon his property and to produce evidence that the value is inaccurate or inequitable.

E. Field Reviews

Property specific data should be compiled from existing office records and field inspections. The parcel identification number, ownership, mailing address, and legal description may be obtained from existing tax rolls. Property classification codes may also be obtained from existing tax rolls (whenever available) and verified in the field.

Local zoning codes may be obtained from existing zoning maps. The property address, and the site and structural characteristics may be obtained by making a physical inspection of each property.

Appraisers must conduct field inspections on 1/6th of the total properties each year of the cycle. In the course of the inspection, the following steps must be adhered to:

- Identifying the property
- Recording the property address
- Interviewing the occupant of the building and recording all pertinent economic data
- Inspecting the interior of the building data
- Measuring and inspecting the exterior of the building, as well as all other improvements on the property, and recording the story height, and the dimensions and/or size of each
- Recording a sketch of the principal building(s), consisting of a plan view showing the main portion of the structure along with any significant attached exterior features, such as porches, etc. All components must be identified and the exterior dimensions shown for each.
- Selecting and recording the proper quality grade, physical condition, and effective age of the improvement
- Selecting and recording the proper replacement costs or replacement cost adjustments for all field priced items
- Reviewing the property record card for completeness and accuracy

After the field inspection is completed, the property record cards must be reviewed for completeness and accuracy.

Complete and accurate data is essential to the program. Definite standardized data collection and recording procedures must be followed if these objectives are to be met.

VIII. VALUATION METHODOLOGY

The type of property and the amount and quality of information available determines the best approach to value the department uses. Not all approaches are relevant nor are they necessarily pertinent in every valuation, although the department reviews and considers each approach.

A. Land Valuation

In making appraisals for Ad Valorem Tax purposes, it is generally necessary to estimate separate values for the land and the improvements on the land. In actuality, the two are not separated and the final estimate of the property as a single unit must be given prime consideration. However, in arriving at that final estimate of value, aside from the requirements for property tax appraisals, there are certain other reasons for making a separate estimate of value for the land:

- An estimate of land value is required in the application of the Cost Approach.
- An estimate of land value is required to be deducted from the total property selling price in order to derive indications of depreciation through market data analysis. (Depreciation being equal to the difference between the replacement cost new of a structure and the actual price paid in the market place for the structure.)
- Land is not a depreciable item, therefore, a separate estimate of land value is required for bookkeeping and accounting purposes; likewise, the total capitalization rate applicable to land may differ from the rate applicable to the improvements on the land.
- Since land may or may not be used to its highest potential, the value of land may be completely independent of the existing improvements on the land.
- Applications of the sales comparison approach are the primary techniques used in land valuation. When sufficient sales data are not available, the appraiser resorts to other methods. In any case, land values must reflect market value in each neighborhood or area, they should also account adequately for differences in size, topography, and so forth among individual parcels.

- The utility of a site will vary with the frontage, width, depth, and overall area. Similarly, the unit land values should be adjusted to account for differences in size between the comparable and the subject property. Since such an adjustment is generally necessary for each lot, it is beneficial that the appraiser adopts and/or develops standardized procedures for adjusting the lot size and the unit values to account for the variation. It is not uncommon for all lots within a development to market at the same price. Should data indicate this, it is necessary to make alterations or adjustments to maintain this value level. In some cases, a “site value” concept has an advantage. Some of the techniques commonly employed are:
 - Standard lot sizing techniques which provide for the adjustment of the frontage, width, and depth of irregular shaped lots to make the units of measurement more comparable with uniform rectangular lots.
 - Standard Depth Tables provide for the adjustment of front foot unit values to account for variations in depth from a predetermined norm.
 - Frontage Tables provide for the adjustment of front footage unit values to account for variations in the relative utility value of excessive or insufficient frontage as compared to a predetermined norm.
 - Acreage or Square Footage Tables provide for the adjustment of unit values to account for variations in the relative utility value of excessive or insufficient land sizes as compared to a predetermined norm.

1. Sales Comparison Approach

The most frequently used method to estimate the value of land is the comparable sales method. In this method, land values are derived from analyzing the selling prices of similar sites. This method uses sales prices as evidence of the value of similar properties. The price at which a particular property sells is the price at which the supply and demand curves intersect at the time of sale. If competitive market conditions were approximated, and conditions have not changed greatly, a similar property would sell at approximately the same price. Because no two properties are ever exactly alike, systematic methods must be used to adjust the prices of sold properties, known as comparison properties, or comparables. The known prices are adjusted by adding or subtracting an amount, which a given feature appears to add to, or subtract from, the price of the comparison property.

In order to apply the comparable sales method, it is first necessary to establish a common unit of comparison. The units generally used in the valuation of land are price per front foot, square foot or acre. The selection of any one particular unit depends upon the type of property being appraised. Frontage may be used for platted, uniform type residential lots, and square footage and acreage for larger, un-platted tracts, as well as irregularly shaped lots lacking in uniformity. Use of square footage is especially desirable in Central Business Districts where the entire lot maintains the same level of value; depth factor adjustments have a tendency to distort this concept. Commercial arteries are also best valued on a square foot basis.

The following outlines the process for analyzing sales:

Sales must first be adjusted for financial considerations such as for atypical financing concessions.

Market conditions, at time of sale, must next be analyzed to account for changes (both increases and decreases) in sales price over time. This factor can be the most difficult to establish and must be derived from the market trends. The most accurate estimation for this trend is sales ratio trend analysis, with the input of date splines which represent the shifts in the market represented over time.

Characteristics such as location, and physical factors such as size, steepness of the lot, views, topography, slope and type of beachfront all can influence the demand of the lots and therefore the final value or adjustment; must be extrapolated from the market. The resultant adjustment must then be made to the comparable sale(s) to account for differences to the subject property.

Influences serve to either increase or decrease value of a particular parcel of land or portions of the parcel, relative to the norm from which the base unit values were established; expressed in terms of a percentage adjustment.

When vacant land sales are insufficient; or the sample size is too small for the sales comparison approach, an appraiser or modeler must resort to one or more less preferred methods. Successful application of these techniques requires careful research and good judgment and a model that expresses the correct relationship of value.

2. Abstraction Method

While it is always preferable to use sales of unimproved lots for comparables, it is not always possible to do so. Older neighborhoods are not likely to yield a sufficient number of representative sales of unimproved lots to permit a valid analysis. In such cases, it is necessary to consider improved property sales and to estimate the portion of the selling price applicable to the structure. The procedure would be to estimate the replacement cost of the buildings as of the date of sale, estimate the accrued depreciation and deduct that amount from the replacement cost. The resulting estimated selling price of the buildings can be deducted from the total selling price of the property to derive the portion of the selling price which can be allocated to the land.

In the abstraction method, improvement values obtained from a cost estimation model are subtracted from the sales prices of improved parcels to yield residual land value estimates:

Sales price (SP) minus improvement value (IV) equals land value (LV) or

$$SP - IV = LV$$

These calculated values are then used as a supplement or as an alternative to vacant land sales in application of the sales comparison approach. The method is particularly useful in highly developed areas where there are few, if any, vacant land sales. Its reliability depends on the accuracy of the sales data and improvement values used in the analysis. In general, the method is more accurate for parcels with relatively new structures, for which replacement cost and depreciation are more easily estimated, or in high demand areas where the land value supersedes the improvement value.

3. Allocation

One technique that may be used to establish a broad indication of land values is a “typical” allocation or ratio method. In this technique, the ratio of the land value to the total value of improved properties is observed in situations where there is good market and/or cost evidence to support both the land values and total values.

This market-abstracted ratio is then applied to similar properties where the total values are known, but the allocation of values between land and improvements are not known. The ratio is usually expressed as a percentage which represents the portion of the total improved value that is land value, or as a formula:

$$\frac{V1}{V2} \times 100\% = V3$$

Where:

V1 = Total Land Value

V2 = Total Property Value

V3 = Percent Land is of Total Property Value

This technique can be used on most types of improved properties, with important exceptions being farms and recreational facilities, provided that the necessary market and/or cost information is available. In actual practice, available market information limits this technique primarily to residential properties, and to a much lesser extent, commercial and industrial properties such as apartments, offices, shopping centers, and warehouses.

The ratio technique cannot give exact indications of land values. It is nevertheless useful, especially when used in conjunction with other techniques of estimating land values because it provides an indication of the reasonableness of the final estimate of land value.

The ratio should be extracted from available market information and applied to closely similar properties. It should be noted that any factor that affects values may also affect the ratio of values. Zoning is particularly important because it may require more or less improvements be made to the land, or may require a larger or smaller minimum size. This tends to have a bearing on the land values, and so it may also influence the ratio of values considerably from community to community.

The following is an example of a residential land valuation situation:

Market information derived from an active new subdivision:

Typical Lot Sale Price (most lots equivalent) \$15,000
Improved Lot Sales (range)
\$65,000 to \$75,000
\$15,000/\$65,000=23%
\$15,000/\$75,000=20%

Indicated ratio: 20%-23%

Similar subdivision, but 100% developed:

Improved Lot Sales (range)
\$85,000 to \$105,000

Broadest Indicated Range of Lot Values

$\$85,000 \times 20\% = \$17,000$
 $\$105,000 \times 23\% = \$24,150$
Value Range: \$17,000 to \$24,150

Narrowest Indicated Range of Lot Values

$\$85,000 \times 23\% = \$19,550$
 $\$105,000 \times 20\% = \$21,000$
\$19,550 to \$21,000

If both lots and improvements vary considerably, the broadest range is most appropriate. If most lots vary little and are judged equivalent but the improvements vary somewhat, the narrowest range is appropriate. Most subdivisions exhibit a combination of the two ranges, showing a narrow typical range, but a wider actual range of land values.

4. Land Residual

In the absence of sufficient market data, income-producing land may be valued by determining the portion of the net income attributable to the land and capitalizing the net income into an indication of value. This technique is rarely used by the department but is still considered a viable alternative method for land valuation.

B. Improvement Valuation

The Montana Supreme Court approved the use of the traditional appraisal methods or approaches for determining market value. The department uses the three approaches to value, utilizing a computer assisted mass appraisal system (CAMAS) for determining 2015 market values.

1. Sales Comparison Approach

An indication of the value of a property can be derived by analyzing the selling prices of comparable properties.

The use of this technique, often referred to as the “comparison approach” or “comparable sales approach,” involves the selection of a sufficient number of valid comparable sales and the adjustment of each sale to the subject property to account for variations in time, location, site and structural characteristics.

The appraiser selects comparable and valid market transactions, and weighs the sales by giving consideration to all factors significant to value and adjusting each to the subject property. The comparable sites must be used in the same way as is the subject property, and subjected to the same zoning regulations and restrictions. It is also preferable, whenever possible, to select comparable sales from the same or similar neighborhood. The major adjustments will account for variations in time, location, and physical characteristics to include size, as well as other factors which may significantly influence the selling price and extracted from the market; such as, quality of the improvements, number of bedrooms, bathrooms, style, story height, etc.

During the process of adjusting the comparable sales to account for variations between them and the subject property, the appraiser must exercise great care to include all significant factors and to properly consider the impact of each of the factors upon the total value.

a. Selecting Valid Comparable Sales

Since market value is defined in 15-8-111, MCA as “the value at which property would change hands between a willing buyer and a willing seller, neither being under any compulsion to buy or sell and both having reasonable knowledge of relevant facts”, it follows that if market value is to be derived from analyzing comparable sales, that the sales must represent valid “arm’s length” transactions. Due consideration must be given to the conditions and circumstances of each sale before selecting the sales for analysis. Some examples of sales which do not normally reflect valid market conditions are as follows:

- Sales in connection with foreclosures, bankruptcies, condemnations and other legal action
- Sales to or by federal, state, county and local governmental agencies
- Sales to or by religious, charitable or benevolent tax exempt agencies
- Sales involving family transfers, or “love and affection”
- Sales involving intra-corporate affiliations
- Sales involving the retention of life interests
- Sales involving cemetery lots
- Sales involving mineral or timber rights, and access or drainage rights
- Sales involving the transfer of part interests

In addition to selecting valid market transactions, it is equally important to select properties which are truly comparable to the property under appraisal.

The comparable and subject properties must exhibit the same use, and the site and structural characteristics must exhibit an acceptable degree of comparability.

b. *Processing Comparable Sales*

All comparable sales must be adjusted to the subject property to account for variations in time and location. The other major elements of comparison will differ depending upon the type of property being appraised. In selecting these elements, the appraiser must give prime consideration to the same factors that influence the prospective buyers of particular types of properties.

The typical home buyer is interested in the property's capacity to provide the family with a place to live. A primary concern is with the living area, utility area, and number of rooms, number of baths, age, structural quality and condition, the presence of a modern kitchen and recreational conveniences of the house. Equally important is the location and neighborhood, including the proximity to and the quality of schools, public transportation and recreational and shopping facilities.

The typical buyer of commercial property, including warehouses and certain light industrial plants, is primarily concerned with its capability to produce revenue. Of special interest will be the age, design and structural quality and condition of the improvements, the parking facilities, and the location relative to transportation, labor markets and trade centers.

In applying the sales comparison approach to commercial/industrial property, the appraiser will generally find it difficult to locate a sufficient number of comparable sales, especially for properties which are truly comparable in their entirety. It will, therefore, be necessary to select smaller units of comparison such as price per square foot, per unit, per room, etc. In doing so, great care must be exercised in selecting a unit of comparison that represents a logical common denominator for the properties being compared. Using such units of comparison enables the appraiser to compare two properties which are similar in use and structural features, but different significantly in size and other characteristics.

Having selected the major factors of comparison, the appraiser must adjust each of the factors to the subject property. In comparing the site, adjustments for size, location, accessibility, and site improvements must be made. In comparing the structures, adjustments for size, quality, design, condition, and significant structural and mechanical components also must be made. The adjusted selling prices of the comparable properties will establish a range in value in which the value of the subject property will fall. Further analysis of the factors should enable the appraiser to narrow the range down on the value level which is most applicable to the subject property.

2. *Cost Approach*

The cost approach involves making an estimate of the depreciated cost of reproducing or replacing the building and site improvements. Reproduction cost refers to the cost at a given point in time of reproducing a replica property, whereas replacement cost refers to the cost of producing improvements of equal utility.

Depreciation is deducted from replacement or reproduction cost new for losses in value caused by physical deterioration, functional obsolescence, and external (economic) obsolescence. The depreciated cost is then added to the estimated value of the land to determine an indication of value.

The significance of the cost approach lies in its extent of application. It is the one approach that can be used on all types of construction. It is a starting point for appraisers, and therefore, it is a very effective “yardstick” in any equalization program for ad valorem taxes. Its widest application is in the appraisal of properties where the lack of adequate market and income data preclude the reasonable application of the other traditional approaches.

a. *Applying the Cost Approach*

Estimating the value of the land and adding the land value to the depreciated cost of the structures will result in a valid indication of value.

(Estimated Land Value + Estimated Replacement Cost New of Structures - Estimated Depreciation = Indication of Property Value)

Since estimating the land value is covered in a separate section, this section will cover Replacement Cost and Depreciation.

b. *Replacement Cost*

Replacement Cost is the current cost of producing an improvement of equal utility to the subject property; it may or may not be the cost of reproducing a replica property. It is not to be confused with Reproduction Cost, which refers to a substitute replica property. In a particular situation the two concepts may be interchangeable, but they are not necessarily so. They both, however, have application in the Cost Approach to value, the difference being reconciled in the consideration of depreciation allowances.

In actual practice, outside of a few historic type communities, developers and builders, for obvious economic reasons, replace buildings rather than reproduce them.

It logically follows that if an appraiser’s job is to measure the actions of knowledgeable persons in the market place, the use of proper replacement costs should provide an accurate starting point in the valuation of most improvements.

The replacement cost includes the total cost of construction incurred by the builder whether preliminary to, during the course of, or after completion of the construction of a particular building. Among these costs are material, labor, all subcontracts, builders' overhead and profit, architectural and engineering fees, consultation fees, survey and permit fees, legal fees, taxes, insurance, and the cost of interim financing.

c. Estimating Replacement Cost

There are various methods that may be employed to estimate replacement cost new. The methods widely used in the appraisal field are the quantity survey method, the unit-in-place (or segregated) method, the comparative (or square foot) method, and trended original cost method.

The quantity survey method involves a detailed itemized estimate of the quantities of various materials used, labor and equipment requirements, architect and engineering fees, contractor's overhead and profit, and other related costs. This method is primarily employed by contractors and cost estimators for bidding and budgetary purposes and is much too labor intensive and costly to be effective in every day appraisal work, especially in the mass appraisal field. However, the quantity survey method, can be useful in developing certain unit-in-place costs which can be more readily applied to estimating costs for appraisal purposes.

The unit-in-place method or segregated cost method, is employed by combining direct and indirect costs, including material, labor, overhead and profit, into a single unit-in-place. When the unit in place is multiplied by the area of the portion of the building being priced, it results in a total cost estimated for various structural components. The prices established for the specified components are related to their most common units of measurement such as cost per yard, cost per lineal foot, and cost per square foot.

The unit prices can then be multiplied by the respective quantities found in the composition of the subject building to derive the whole dollar component cost, the sum of which is equal to the estimated cost of the entire building, providing of course, that due consideration is given to all other indirect costs, which may be applicable.

The comparative unit or square foot method is the easiest, fastest, and most widely used method of cost estimation. Both direct and indirect costs, along with entrepreneurial profit, are summed and divided by an appropriate unit such as square feet area or cubic feet of volume, to derive a cost per unit. Comparative costs can be obtained from nationally published cost manuals or developed locally from an analysis of actual costs of benchmark structures. These costs are arranged in schedules based on type and quality of construction, size, and shape.

Percentage or lump sum adjustments for features not included in the comparative unit cost can be made with the unit-in-place method.

The trended original cost method obtains an estimate of the reproduction cost of a structure by trending its historical cost with a factor from an appropriate construction cost index. The trended original cost method can be used to estimate current costs of structures for which comparable cost data are not readily available. It is especially useful for updating the cost estimate of recently constructed properties.

Developed and applied properly, these pricing techniques will assist the appraiser in arriving at valid and accurate estimates of replacement cost new as of a given time. That cost generally represents the upper limit of value of a structure. The difference between its replacement cost new and its present value is depreciation. The final step in completing the cost approach then is to estimate the amount of depreciation and deduct it from the replacement cost new.

d. *Depreciation*

Depreciation can be defined as a loss in value from all causes. As applied to real estate, it represents the loss in value between market value and the sum of the replacement cost new of the improvements plus the land value as of a given time. The causes for the loss in value may be divided into three broad classifications: physical deterioration, functional obsolescence, and economic obsolescence.

Physical deterioration involves the wearing out of the various building components, and refers to both short life and long life terms, through the action of the elements, age, and use. The condition may be considered either curable or incurable, depending upon whether it may or may not be practical and economically feasible to cure the deficiency by repair and replacement.

Functional obsolescence is a condition caused either by inadequacies or over adequacies in design, style, composition, or arrangement inherent to the structure itself, which tends to lessen its usefulness.

Total accrued depreciation may be derived by first estimating the total useful life of a structure and then translating its present condition, desirability, and usefulness into an effective age rather than an actual age. This represents the percentage of the property's total life which has been used up. The effective age is then subtracted from the base year to arrive at the effective year.

Like physical deterioration the condition may be considered either curable or incurable. Some of the more common examples of functional obsolescence are excessive wall

and ceiling heights, excessive structural construction, surplus capacity, ineffective layouts, and inadequate building services.

Economic obsolescence is a condition caused by factors extraneous to the property itself, such as changes in population characteristics and economic trends, encroachment of inharmonious land uses, excessive taxes, and governmental restrictions. The condition is generally incurable in that the causes lie outside the property owner's realm of control.

e. Estimating Depreciation

An estimate of depreciation represents an opinion of the appraiser as to the degree that the present and future appeal of a property has been diminished by physical deterioration, functional, or economic obsolescence. Of the three estimates necessary to the cost approach, it is the one most difficult to make. The accuracy of the estimate will be a product of the appraiser's experience in recognizing the symptoms of deterioration and obsolescence and the ability to exercise sound judgment in equating all observations to the proper monetary allowance to be deducted from the replacement cost new. There are several acceptable methods which may be employed:

Physical deterioration and/or functional obsolescence can be measured by observing and comparing the physical condition and/or functional deficiencies of the subject property as of a given time with either an actual or hypothetical, comparable, new and properly planned structure.

Curable physical deterioration and functional obsolescence can be measured by estimating the cost of restoring each item of depreciation to a physical condition as good as new, estimating the cost of eliminating the functional deficiency.

Functional and economic obsolescence can be measured by capitalizing the estimated loss in rent due to the structural deficiency or lack of market demand.

Total accrued depreciation may also be estimated by deriving the amount of depreciation recognized by the purchase price of the property. The loss of value is the difference between the cost of replacing the structure new and its actual selling price (total property selling price less the estimated value of the land).

3. Income Approach

The income approach defines value as the present worth of future benefits of the property by the capitalization of the net income stream over the remaining economic life of the property. This approach involves making an estimate of the "effective gross income" of a property. We derive this estimate by deducting the appropriate vacancy and collection losses from its estimated economic rent, as shown by the yield of

comparable properties. From this figure, we deduct applicable operating expenses, resulting in an estimate of net income which may then be capitalized into an indication of value. The basic formula is: value equals income divided by rate.

a. *The Principals of Capitalization*

Capitalization is the process for converting the net income produced by property into an indication of value. Through the years of appraisal history, a number of procedures have been recognized and employed by appraisal authorities in determining the value of real estate by the income approach. Although present day practice recommends only certain methods, there are other approaches to value.

The most prominent methods of capitalization are direct capitalization, straight-line capitalization, sinking fund capitalization, and annuity capitalization. Each of these is a valid method for capitalizing income into an indication of value. The basis for their validity lies in the action of the market, which indicates that the value of income producing property can be derived by equating the net income with the net return anticipated by informed investors. This can be expressed in terms of a simple equation:

$$\text{capitalization rate} = \frac{\text{Net Income}}{\text{Sale Price}}$$

The straight-line and sinking fund methods are both actual forms of straight capitalization, with one using straight-line recapture and the other using sinking fund recapture. Both methods follow the same basic principles as direct capitalization, differing only in that they provide for separate capitalization rates for land and building; the building rate differing from the land rate in that it includes an allowance for recapture.

Straight-line capitalization allows for “recapture” based on remaining economic life of the building implying that at the end of that period of time, there would be a zero improvement value. There are three fallacies in this thinking. First, the potential buyer or investor has no intention of holding the property that long. The average investment period might average ten years. Second, the investor anticipates that at the end of that period he either will get all his money back or will make a profit. And third, is the depreciation allowance possible in connection with federal income taxes.

Depreciation allowances begin to run out between seven and ten years, so the advantages of owning the property are reduced considerably. A prudent owner may choose to sell the property at this point and re-invest in another property so that he may begin the depreciation cycle again and continue to take full advantage of the favorable tax laws. For these reasons, the straight line capitalization method does not usually follow what the market indicates. Straight-line recapture calls for the return of

investment capital in equal increments or percentage allowances spread over the estimated remaining economic life of the building.

Sinking fund recapture calls for the return of invested capital in one lump sum at the termination of the estimated remaining economic life of the building.

This is accomplished by providing for the annual return of a sufficient amount needed to invest and annually re-invest in “safe” interest bearing accounts, such as government bonds or certificates of deposit, which will ultimately yield the entire capital investment during the course of the building’s economic life. Annuity capitalization lends itself to the valuation of long term leases. In this method, the appraiser determines, by the use of annuity tables, the present value of the right to receive a certain specified income over a stipulated duration of the lease. In addition to the value of the income stream, the appraiser must also consider the value that the property will have once it reverts back to the owner at the termination of the lease. This reversion is valued by discounting its anticipated value against its present day worth. The total property value then is the sum of the capitalized income stream plus the present worth of the reversion value.

b. *Current Techniques*

There are two methods, however, that do lend themselves to an accurate measure of market value based on potential income. These are direct capitalization, utilizing the direct comparison method of rate selection, and mortgage equity capitalization.

i. Direct Capitalization

In direct capitalization, the appraiser determines a single “overall” capitalization rate. This is done by analyzing actual market sales of similar types of properties. He develops the net income of each property, and divides the net income by the sales price to arrive at an overall rate to provide an indication of value.

ii. Mortgage Equity Capitalization

Mortgage equity capitalization is a form of direct capitalization with the major difference in the two approaches being the development of the overall capitalization rate.

In this method, equity yields and mortgage terms are considered influencing factors in construction of the interest rate. In addition, a plus or minus adjustment is required to compensate for anticipated appreciation or depreciation. This adjustment can be related to the recapture provisions used in other capitalization methods and techniques.

For purposes of illustration, assume an investment financed with a 70% loan at 14.0% interest. The term of the mortgage is 20 years, paid off in level monthly payments. The total annual cost for principal and interest on such a loan can be determined by referring

to the mortgage equity tables. Select the constant annual percent for an interest rate of 14.0% and a term of 20 years. Note that the constant is 14.92% of the amount borrowed, or .92% more than the interest rate alone.

Assume that the equity investor will not be satisfied with less than an 18% yield. The income necessary to satisfy both lender and equity can now be shown. The product of the percent portion and the rate equals the weighted rate. The total of each weighted rate equals the weighted average.

	Weighted Mortgage
	Portion Loan
	<u>Rate Rate</u>
70%	.1492 = .1044 (Principal interest)

Only a portion of the principal will be paid off and this amount must be discounted, as it won't be received for ten years. From the table of loan balance and debt reduction, at the end of ten years for a 20-year mortgage at 14%, the figure is 0.199108. Consulting the sinking fund tables indicates that the discount factor for 18% and 10 years is .0425.

The credit for equity buildup can now be deducted from the basic rate, thus: (% of loan paid in 10 yrs.) x (loan rate) x (sinking fund 18% for 10 yrs.)

Weighted Average	.1584
.199108 x 70% x .0425	<u>-.0059</u>
Resulting Net Rate =	.1525

iii. Residual Techniques

It can readily be seen that any one of the factors of the capitalization equation (value=net income divided by capitalization rate) can be determined if the other two factors are known. Furthermore, since the value of the property is the sum of the land value plus the building value, it holds that either of these can be determined if the other is known. The use of these mathematical formulas to capitalizing income into an indication of value are referred to as the residual techniques, or more specifically, the property residual, the building residual, and the land residual techniques.

The property residual technique is an application of direct capitalization. In this technique, the total net income is divided by an overall capitalization rate, which provides for the return on the total investment, to arrive at an indicated value for the property. This technique has received more popular support in recent years because it closely reflects the market. With this technique, the capitalization rate may be developed by either direct comparison in market or by the mortgage equity method.

The building residual technique requires the value of the land to be a known factor. The amount of net income required to earn an appropriate rate of return on the land

investment is deducted from the total net income. The remainder of the net income, or residual, is divided by the building capitalization rate.

Note that the “constant annual percent” is used for the rate of the loan.

Since there is a gain in equity’s position through the years as the loan is paid off little by little, it is necessary to calculate the credit for equity build-up. The lands residual technique requires the value of the building to be a known factor. The amount of net income required to provide both a proper return on and the recapture of the investment is deducted from the total net income. The remainder of the net income, or residual, is then divided by the land capitalization rate, which is composed of a percentage for the return on the investment, plus an effective tax rate, to arrive at an indicated value for the land.

c. Exploring the Rental Market

The starting point for an appraiser is an investigation of current economic rent in a specific area in order to establish a sound basis for estimating the gross income that should be returned from competitive properties. The appraiser must make a distinction between economic rent, and the rent which property is normally expected to produce on the open market, as opposed to control rent or the rent which a property is actually realizing at the time of the appraisal due to lease terms established sometime in the past.

The first step then is to obtain specific income and expense data on properties which best typify normal market activity. The data is necessary to develop local guidelines for establishing the economic rent and related expenses for various types of properties.

The next step is to similarly collect income and expense data on individual properties, and to evaluate the data against the established guidelines.

The collection of income and expense (I & E) data is an essential phase in the valuation of commercial properties. The appraiser is primarily concerned with the potential earning power of the property. The objective is to estimate its expected net income. Income and expense statements of past years are valuable only to the extent which they serve this end. The appraiser should consider the following factors when evaluating I & E data in order to arrive at an accurate and realistic estimate of net income.

d. Income Data Analysis

Was the reported income produced entirely by the subject property? Very often the rental will include an amount attributable to one or more additional parcels of real estate. In this case, it would be necessary to obtain the proper allocations of rent.

Was the income attributable to the subject property as it physically existed at the time of the appraisal, or did the appraisal include the value of leasehold improvements and remodeling for which the tenant paid in addition to rent? If so, it may be necessary to adjust the income to reflect economic rent.

Does the reported income represent a full year's return? It is often advisable to obtain both monthly and annual amounts as a cross check.

Does the income reflect current economic rent? Is part or all of the income predicated on old leases? If so, what are the provisions for renewal options and rates?

Does the reported income reflect 100% occupancy? What percentage of occupancy does it reflect? Is this percentage typical of this type of property, or is it due to special nonrecurring causes?

Does the income include rental for all marketable space? Does it include an allowance for space, if any, which is either owner or manager occupied? Is the allowance realistic?

Is the income attributable directly to the real estate and conventional amenities? Is some of the income derived from furnishings and appliances? If so, it will be necessary to adjust the income or make provisions for reserves to eventually replace them, whichever local custom dictates.

In many properties, an actual rental does not exist because the real estate is owner occupied. In this event it is necessary to obtain other information to provide a basis to estimate economic rent. The information required pertains to the business operation using the property. Proper analysis of the annual operating statements, including gross sales or receipts, can provide an accurate estimate of economic rent. Information requirements for a few of the more common property uses are as follows:

Retail Stores: The annual net gross sales. (Gross sales less returned merchandise)

Hotels and Motels: The annual operating statement. If retail or office space is leased in these properties, obtain the actual rent paid.

Theaters: The annual gross receipts (including admission and concessions) and seating capacity.

Automobile Parking: The annual gross receipts.

e. *Expense Data Analysis*

An appraiser must consider only those expenses which are applicable to the cost of ownership; that is, those expenses which are normally owner incurred. Any portion of

the expenses incurred directly or indirectly by the tenant should not be considered. Each expense item must be both legitimate and accurate. They must be consistent with the established guidelines and norms and with the expenses incurred by comparable properties.

Management costs refer to the cost of administration. These charges should realistically reflect what a real estate management company would actually charge to manage the property. If no management fee is shown on the statement, a proper allowance must be made by the appraiser. On the other hand, if excessive management charges are reported the appraiser must disregard the reported charges and use an amount which he deems appropriate and consistent with comparable type properties. The cost of management bears a relationship with the risk of ownership and will generally range between 4 to 10% of the gross income.

General expenses may include such items as the cost of services and supplies not charged to a particular category. Unemployment and F.I.C.A. taxes, Workmen's Compensation, and other employee insurance plans are usually legitimate deductions when employees are a part of the building operation.

Reimbursed expenses refer to the expenses associated with the maintenance of public or common areas of a commercial property. This expense is passed on to the tenants and should only be considered when the amount of reimbursement is included as income.

Miscellaneous expenses are the "catch all" category for incidentals. This item should reflect a very nominal percentage of the income. If expenses reported seem to be excessive, the appraiser must examine the figures carefully in order to determine if they are legitimate expenses and if so, to allocate them to their proper category.

Cleaning expenses are legitimate charges. They can be for such items as general housekeeping and maid service, and include the total cost of labor and related supplies. All or a portion of the cleaning services may be provided by outside firms working on a "contract" basis. Cleaning expenses vary considerably and are particularly significant in operations such as offices and hotels. Rule of thumb norms for various operations are made available through national management associations. The appraiser should have little difficulty in establishing local guidelines.

Utilities are generally legitimate expenses and if reported accurately, need very little reconstruction by the appraiser, other than to determine if the charges are consistent with comparable properties. Local utility companies can provide the appraiser with definition guidelines.

Heat and Air Conditioning costs are often reported separately and in addition to utilities. The expenses would include the cost of fuel other than the above mentioned utilities, and may include, especially in large installations, the cost of related supplies, inspection fees, and maintenance charges. These are generally legitimate costs, and the same precautions prescribed for “utilities” are in order.

Elevator expenses, including the cost of repairs and services, are legitimate deductions, and are generally handled through service contracts. These fees can generally be regarded as fairly stable annual recurring expenses.

Decorating and minor alterations are necessary to maintain the income stream of many commercial properties.

In this respect they are legitimate expenses. However, careful scrutiny of these figures is required. Owners tend to include the cost of major alterations and remodeling which are, in fact, capital expenditures, and as such are not legitimate operating expenses.

Repairs and maintenance expenses reported for any given year may not necessarily be a true indication of the average or typical annual expense for these items. For example, a statement could reflect a substantial expenditure for a specific year, possibly because the roof was replaced and/or several items of deferred maintenance were corrected, and yet the statement for the following year may indicate that repairs and maintenance charges were practically nonexistent. An appraiser should obtain complete economic history on each property in order to make a proper judgment as to the average annual expense for these items, or include a proper allowance based on norms for the type and age of the improvements to cover annual expense. Since it is neither possible nor practical to obtain enough economic history on every property, the amounts reported for repairs and maintenance is then estimated by the appraiser.

Insurance: Caution must be used in accepting insurance expense figures. Cost shown may be for more than one year, or may be for blanket policies including more than one building. It is generally more effective for appraisers to establish their own guidelines for insurance. They must also be careful to include only items applicable to the real estate. Fire extended coverage and owner’s liability are the main insurance expense items. Separate coverage on special component parts of the building, such as elevators and plate glass, are also legitimate expenses.

Real Estate Taxes: In making appraisals for tax purposes, the appraiser must exclude the actual amount reported for real estate taxes. Since future taxes will be based on the appraised value, the appraiser must express the taxes as a factor of the estimated value. This can be done by including an additional percentage in the capitalization rate to account for real estate taxes.

Depreciation: The figure shown for depreciation on an operating statement is a “bookkeeping figure” which the owner uses for Internal Revenue Service purposes and should not be considered in the income approach. This reflects a tax advantage which is one of the benefits of ownership.

Interest: Although interest is considered a legitimate expense, it is always included in the capitalization rate. Most property is appraised as if it were free and clear; however, the appraiser does consider the interest of a current mortgage in the capitalization rate build-up.

Land Rent: When appraising for real estate tax purposes, only the sum of the leasehold and the leased fee is usually considered. Land rent is not deducted as an expense. Considered separately, rent from a ground lease would be an expense to the leasehold interest and an income to the leased fee. However, if land were rented from another property to supply additional parking for example, that land rent would be an allowable expense.

It is obvious that there are some expense items encountered on operating statements that appraisers should not consider as allowable. This is because they are interested in legitimate cash expenses only. Income statements are usually designed for income tax purposes where credit can be taken for borrowing costs and theoretical depreciation losses.

It is virtually impossible and certainly not always practical to obtain a complete economic history on every commercial property being appraised. On many properties, however, detailed economic information can be obtained through the use of income and expense forms. One must realistically recognize the fact that the data obtainable on some properties is definitely limited.

In most cases, the gross income and a list of the services and amenities furnished can be obtained during the data gathering operation. However, in order to insure a sound appraisal, it may be necessary to estimate the fixed and operating expenses. This is best accomplished by setting guidelines for expenses, based on a percent of effective gross income or a cost per square foot of leasable area. These percentages or costs will vary depending on the services supplied and the type of property.

IX. PLANNING AND ORGANIZATION

The department conducts a number of activities on an annual basis in preparation for our annual certification to the counties. The department also conducts a number of activities in preparation for the subsequent reappraisal cycle. See Exhibit B. A chart outlining our primary activities for both our annual and reappraisal work.

X. ANALYSIS OF RESOURCES

The Property Assessment Division assesses approximately \$1.4 billion in taxes. Approximately 80% of the taxes generated are for schools and local government operations. The taxes generated allow local governments to provide police and fire protection, build roads, bridges, parks, etc.

The property assessment division is comprised of a central office located in Helena, four regional areas, and 56 local revenue offices, one in each county seat. The property assessment division conducts its work by employing managers, appraisers, and property valuation specialists in our local county offices and managers and management analysts in our central office.

The central office staff provides: technical assistance to the field offices; manages the department's computer assisted mass appraisal system (CAMAS); manages our cadastral data; and works closely with the local revenue offices in collecting data, conducting quality assurance, and analyzing the data. Data collection and data management are key components to accurate appraisals. The field offices provide: customer service directly to the property taxpayer; collect data; perform quality assurance; analyze data; and work closely with the local county government officials by providing assistance in valuation questions and property specific information.

XI. Property to be Reappraised

The department's reappraisal plans for residential, commercial, industrial, agricultural and forestland have been adopted by rule in the Administrative Rules of Montana.

A. Residential Property

The department promulgated the 2015 Residential and Commercial Reappraisal Plan in ARM 42.18.134.

The appraisal of residential property consists of field reviews; the collection, verification and analysis of sales information; the data entry of missing or updated information, new improvements, and sales information; the development and review of computer assisted land pricing (CALP) models/benchmarking, the use of door hangers where appropriate, the use of self-reporting forms, where appropriate; and final determinations of value. Multiple field reviews of each property will be kept to an absolute minimum.

The appraisal plan provides for field reviews to be conducted. Field reviews of residential property consist of an internal or external observation to determine the accuracy of existing information on the property record card, the observation of

condition, the review of grade and depreciation and the collection of additional data. No callback will be made to the property unless specifically requested by the taxpayer or department.

The collection, verification, analysis and data entry of sales information is an important component of CAMAS. Accuracy of sales information is critical to the development of accurate sales comparison models, individual property final value determinations, and the defense of final value estimates.

The development of market models using CAMAS is a requirement for property valuation during the appraisal cycle.

The key components that influence value and the appropriate level of influence are determined through use of multiple regression analysis. Staff may develop separate sales comparison models for each neighborhood or by combining similar neighborhoods.

Property Record Cards (PRC's) are generated and reviewed by appraisal staff. PRC's include physical characteristics and component information, property sales, basic ownership, and valuation information. The review will consist of analyzing and collecting component information such as condition and style of improvements. This review will allow the appraiser to compare property information to an estimate of value. Discrepancies in data or the collection of additional information required by the review will result in the update of CAMAS data.

Final determinations of value are conducted once all required field and program needs of CAMAS are met. The appraisal value for residential property may include indicators of value using the cost approach, and the sales comparison approach.

B. Commercial Property

The department promulgated the 2015 Residential and Commercial Reappraisal Plan in ARM 42.18.134.

The appraisal of commercial property consists of field reviews; collection, verification and analysis of sales and income information; data entry of sales and income information; development and review of land valuation models, development of models/benchmarking; and final determinations of market value.

The appraisal plan provides for field reviews. A field review of commercial property consists of an internal or external observation to determine accuracy of existing information on the inventory content sheet and PRC's, to observe condition; to review depreciation assignment; and to collect additional data.

Commercial property data consists of correcting, updating and adding commercial property data on the department of Revenue CAMAS.

The collection, verification, analysis and data entry of sales and income information is an important component of CAMAS. Accuracy of sales information and income information is critical to accurate land valuation; to benchmarking; to the development of accurate income models and sales comparison models; to individual property final value determinations; and to the defense of final value estimates.

Commercial lots and tracts are valued through the use of CALP models. Homogeneous areas within each county are geographically defined as neighborhoods. The CALP models will reflect January 1, 2015, land market values.

The development of income models using CAMAS is a component for property valuation during the reappraisal cycle. Staff may develop separate income models for each neighborhood.

Property record cards are generated and reviewed by appraisal staff. These PRC's include physical characteristics and component information, income information, sales information, basic ownership information, and valuation information. The review will consist of analyzing and collecting component information. This review will allow the appraiser to review and compare property information to an estimate of value. Discrepancies in data or the collection of additional information required by the review will result in the update of CAMAS data.

Final determinations of value are conducted once all required field and program needs of CAMAS are met. The appraisal value for commercial property may include indicators of value using the cost approach, and, when possible, the sales comparison approach. The appraisal value supported by the most defensible valuation information serves as the value for ad valorem tax purposes.

C. Agricultural Property and Forest Lands

The department promulgated the 2015 Agricultural and Forest Lands Reappraisal Plan in ARM 41.18.135.

Agricultural and forest lands are valued in accordance with administrative rules adopted by the department in Title 42, Chapter 20. The department updates use changes on both agricultural and forest lands annually. For agricultural land the valuation methodology and agricultural land valuation schedules are developed in accordance with 15-7-201, MCA. For forest land the valuation methodology and forest land valuation schedules are developed in accordance with 15-44-103, MCA. The agricultural and

forest lands values will reflect productivity values in accordance with 15-7-201 and 15-44-103, MCA.

The appraisal of agricultural/forest lands consists of field reviews of agricultural/forest lands improvements; agricultural/forest lands property data collection and analysis; the data entry of agricultural/forest lands information; and final determinations of value.

The appraisal plan provides for field reviews. A field review consists of an external observation to determine accuracy of existing information on the property record card; to review agricultural and forest lands classification, and to collect additional data required to implement CAMAS. Multiple field inspections will not be made to the property unless specifically requested by the taxpayer or the department. Multiple field reviews of each property to be kept to an absolute minimum.

Agricultural/forest lands property data entry consists of correcting, updating, and adding agricultural/forest lands property data to the department's CAMAS. This process also consists of reviewing quality assurance reports which result from that process and the manual entry of agricultural/forest lands information to CAMAS. In addition, the productivity data of agricultural and forest land is corrected, updated and added in CAMAS.

Property Record Cards are generated and reviewed by appraisal staff. PRC's include physical characteristics and component information for agricultural/forest lands, productivity information, basic ownership and valuation information. This review allows the appraiser to compare property information to an estimate of value.

Discrepancies in data or the collection of additional information required by the review will result in the update of data on CAMAS. The addition or refinement of existing data results in a more accurate valuation estimate.

Final determinations of value are conducted once all required field and program needs of CAMAS are met. The appraised value for agricultural/forest land includes an estimate of productive value.

D. Industrial Property

The department promulgated the 2015 Industrial Property Reappraisal Plan in ARM 42.18.136.

Industrial property is valued as one entity; the valuation includes both real and personal property. The department adheres to ARM 42.22.1301 through 42.22.1310. Industrial property appraisers distribute appraised values to the appropriate local revenue offices.

XII. PERFORMANCE ANALYSIS

The department is required to conduct a sales assessment ratio study of residences for the Revenue and Transportation Interim Committee (RTIC) at the end of the second and fourth year of each reappraisal cycle in accordance with § 15-8-111(4), MCA. The studies measure the department's assessment performance with the market at various points in time. The studies allow RTIC to remain apprised of market trends and the department's reappraisal performance. The department's measure of performance is based upon the International Association of Assessing Officers (IAAO) standards. IAAO calls for a median assessment ratio between 0.90 to 1.10, 1.00 is market value. The department also follows Standard 6 - Mass Appraisal, of the IAAO standards.

XIII. INFORMAL ASSESSMENT REVIEWS AND APPEALS

The informal assessment review process allows the department to take a closer look at a particular property and determine whether the valuation is accurate based on new or unknown information provided by the property owner. Property owners also have the right to appeal to the County Tax Appeal Board and the State Tax Appeal Board neither of which are affiliated with the department.

A. Informal Assessment Reviews (Form AB-26)

The informal assessment review process allows a property taxpayer an opportunity to explain to the department why the taxpayer believes the value shown on their assessment notice is incorrect. It also allows the department the opportunity to address the taxpayer's concerns. A form AB-26 must be completed and returned to the department's local revenue office as shown on the assessment notice on or before the first Monday in June of the current tax year, or 30 days after the date on the assessment notice, whichever is later. AB-26 forms are available in the department's local offices and online at <http://revenue.mt.gov/home/property/appeal-process.aspx>.

The department encourages property owners who have questions or concerns about their property values to use the form AB-26 process. A complete list of the addresses and phone numbers for the department's 56 local offices can be found at revenue.mt.gov/home/property/contact-us.aspx. Any taxpayer who has received an assessment notice for Class three, four, eight (personal property) or ten properties and has questions concerning the assessment or believes that the assessment is incorrect may file a form AB-26. The property taxpayer, representative, or power of attorney may complete the form AB-26.

A property taxpayer owning the following types of property may request an informal assessment review:

- Class Three properties include agricultural land, one-acre homestead on agricultural land, non-productive patented mining claims and non-qualified agricultural land.
- Class Four properties include residential, commercial and industrial land and improvements, including improvements on agricultural land. Also included are one-acre homesteads on forest and non-qualified agricultural land, mobile homes, manufactured homes and golf courses.
- Class Eight properties include business equipment, machinery, livestock, and all other property that is not included in any other class of property.
- Class Ten properties is forestland.

As a general rule, the property taxpayer should file a separate form AB-26 for each separately assessed parcel. If a taxpayer wishes to appeal his or her property taxes and receive a refund if successful, the taxpayer must pay his or her taxes under protest.

This must be done before the taxes become delinquent. The protest must be filed with the County Treasurer in writing, specifying the grounds for protest and the taxes that must be paid by the due date. Property taxes are billed and collected by the local county treasurer. Please direct any questions regarding property tax billing and collection to the county treasurer.

B. County Tax Appeal Board

If a property taxpayer is not satisfied with the results of the informal review, or if they do not want to use the informal review process, they can appeal their value to the County Tax Appeal Board.

Appeals to the County Tax Appeal Board must to be filed with the Clerk and Recorder in the county in which the property is located and on or before the first Monday in June or 30 days after the property taxpayer receives their property assessment notice or, if they requested an informal review, within 30 days of the department's decision. Appeal forms are available in local county Clerk and Recorder's offices and on the State Tax Appeal Board's website at <http://stab.mt.gov/default.mcp>.

C. State Tax Appeal Board

The State Tax Appeal Board is an administrative board tasked with providing an independent and neutral review of the department's valuation of real property for tax

purposes. If a taxpayer is not satisfied with the County Tax Appeal Board's decision, the taxpayer can appeal to the State Tax Appeal Board. Appeals to the State Tax Appeal Board must be filed within 30 days of receiving the County Tax Appeal Board's decision. Appeals challenging the denial of Extended Property Tax Assistance Program (EPTAP), Property Tax Assistance Program (PTAP), or an exemption may appeal directly to the State Tax Appeal Board, otherwise the county tax appeal process must be exhausted before appealing to the State Tax Appeal Board. The decision of the State Tax Appeal Board is final, unless appealed to district court.

More information can be found on the State Tax Appeal Board's website at <http://stab.mt.gov/default.mcp.x>.

XIV. SOURCES

§ 15-1-201, MCA

§ 15-6-133, MCA

§ 15-6-134, MCA

§ 15-6-143, MCA

§ 15-7-111, MCA

§ 15-7-111(5), MCA

§ 15-7-201, MCA

§ 15-8-111(1)-(2) (a), MCA

§ 15-8-111(4), MCA

§ 15-44-103, MCA

Admin. R. M. 42.18.134 (2012)

Admin. R. M. 42.18.135 (2012)

Admin. R. M. 42.18.136 (2012)

Admin. R. M. 42.22.1301 - 1310 (2005)

Department of Revenue. (2012). Property Taxes. In *Montana Department of Revenue Biennial Report July 1, 2010 - June 3, 2012* (pp. 143-144)

Eckert, J. K., Gloudemans, R. J., Almy, R. R., & International Association of Assessing Officers. (1990). *Property appraisal and assessment administration*. Chicago, IL: International Association of Assessing Officers

Mont. Const. art. VIII, §§ 3-4

Property Appraisal and Assessment Administration; IAAO 1999

Mass Appraisal of Real Property; Robert Gloudamans, IAAO 1999

Property Assessment Valuation; IAAO Third Edition, IAAO 2010

EXHIBIT A

The following Economic Areas were identified for the 2015-2020 Reappraisal:

Flathead, Lake

Cascade

Fergus, Hill

Choteau, Toole, Blaine, Pondera, Teton, Judith Basin, Glacier, Liberty

Missoula, Ravalli

Gallatin, Beaverhead, Madison

**Powder, Phillips, Custer, Dawson, Roosevelt, Valley, Big Horn, Richland,
Rosebud, Treasure, Sheridan, Daniels, Fallon, McCone, Carter, Prairie, Garfield,
Wibaux**

Yellowstone, Carbon, Musselshell, Stillwater, Sweet Grass, Wheatland, Meagher

Lewis and Clark, Broadwater, Jefferson

Butte-Silver Bow, Powell, Anaconda – Deer Lodge, Granite

Sanders, Mineral, Lincoln

EXHIBIT B

