Chapter 9
Commercial Valuation

Classification

For assessment purposes commercial property consists of properties for which the predominant use is the selling of merchandise or a service. Apartment houses of four or more units and office buildings are also included in this category. Apartment houses of less than four units are classified as residential since they are not normally purchased as an investment. This classification will also include vacant land, and parcels with vacant improvements, for which the most likely use is commercial.

The assessor may discover buildings which can house either commercial or manufacturing enterprises. Because the real estate market is one of constant change, these structures may switch from one classification to another. It is, therefore, important that the assessor work with the Department of Revenue (DOR) manufacturing staff to be sure that the property is classified correctly. Specifics on classifying property can be found in WPAM Chapter 5.

Trends and Factors

The assessment of commercial property can range from a small retail store to a large office complex, an apartment building or a regional shopping center. Each type of property presents unique valuation problems. This requires the assessor to possess a great deal of knowledge about the current economic conditions of the area and any trends and factors that may influence the value of commercial property. These trends and factors may not be applicable in all cases but the assessor should be aware of their potential effect on value. Sources for this information include banks, savings and loan associations, real estate brokers and appraisers, U.S. Census, utility companies, colleges and universities, and other assessors.

Economic climate. The assessor should be aware that changes at any level of the economy can have an effect on value. These changes can occur at the international, national, state, and regional levels. It is not enough for assessors to be only aware of trends in their individual municipalities. For example, the construction of a large regional shopping complex will have an influence on the market value of retail stores in neighboring municipalities. It is the assessor's duty to be aware of these changes and how they will be reflected in the market value estimate.

Cost and availability of funds. The demand for commercial property is strongly influenced by the cost and availability of financing. Cost and availability typically have an inverse relationship – high interest rates usually cause a decrease in demand for commercial property.

Population/Demographics. This involves knowledge of any changes in size, location, movement, composition, or density of the population. Any changes in population can have an influence on the demand for commercial products or services. For example, an increase

in the population will result in an increased demand for products and services which will increase the value of commercial property. Changes in population will also affect the demand for apartment buildings.

Available commercial space. After studying the trends in size and location of population and the existing amount of space devoted to various commercial enterprises, the assessor should be able to develop an estimate of the space needed and the present amount of space available for commercial usage. This analysis of supply and demand can be used to estimate future needs for commercial space in the municipality. Among those areas that should be studied is whether new construction is competitive or complementary. A competitive use is a similar enterprise either in the immediate area or in a nearby shopping center. When new construction in the same area of the subject is of complementary use or uses, this can cause the buildup of a commercial area that attracts an additional number of customers for all these stores.

Trends of industry. An increase or decrease in the level of employment in the industries in a municipality will have an effect on commercial supply and demand. New industrial development will need new services for itself and the additional employment will create increased demand for commercial services and products.

Utilities. The quality and availability of utilities will influence value. If some utilities are unavailable or would be extremely costly to install, the value of the property will be affected.

Purchasing power. The purchasing power of an area will determine what type of commercial enterprises it can support. An area in which income is either low or fixed (i.e. social security) will support different commercial enterprises than an affluent professional neighborhood.

Governmental policies and regulations. It is important to have a knowledge of government regulations and policies, including the planning and zoning laws of the community. Planning and zoning laws can limit the types of commercial structures that may be built and the uses that can be made of present property. Just as important as the laws, is how they are enforced. If a property owner can easily obtain a variance from the zoning laws, their impact is limited.

Other types of government regulations and policies that may have an impact on commercial property include local annexation policies, environmental regulations, and level of taxes. Lower taxes decrease the operating expenses of a commercial property, therefore increasing its net operating income and its value. Even such things as the enrollment policies of a local college or university can affect the demand for student housing.

Transportation. The types of transportation available and the traffic flow are vital to the success of commercial enterprises. A business may lose customers because access is poor, roads are in bad shape, or there is inadequate parking space available.

Analysis of Commercial District

There are basically eight different kinds of commercial districts, based on location in the community.

1. **Central Business District (CBD) -** The downtown area is usually the center of commercial activity, providing a full range of retail stores, office buildings, financial facilities, governmental centers, entertainment and cultural centers, and other facilities primarily oriented to pedestrian traffic. Types of stores found in a downtown area differ from those found in outlying areas. In the recent past, CBDs have not experienced the same growth and development pattern as other commercial districts. The development of suburban shopping malls and the migration of department stores and other business to outlying areas have undercut the former dominance of the CBD. The functions of some CBDs have changed from a retail center to a government or entertainment center. Growth in the central business district can be obstructed by set street patterns and surrounding industrial and residential developments.

The shifting functions of the CBD can lead to changes in land use and potential increases (or decreases) in real estate values. Values of centrally located land can be inflated due to scarcity of vacant sites.

2. **Redevelopment areas –** Many cities are redeveloping centrally located deteriorating areas with new commercial, residential, and industrial uses. Frequently the only way these areas are redeveloped is through government programs.

3. **Strip developments –** This type of commercial property is found along major arterials in most cities, affording businesses maximum exposure. Such businesses often rely on a high volume of vehicle traffic.

4. **Neighborhood shopping areas –** As residential sections mature, neighborhood shopping areas develop as a convenient market for daily needs of nearby residents. Such areas do not aim to provide all types of products and services.

5. **Outlying commercial areas –** Developments in outlying areas are usually at or near major intersections, convenient to a high volume of highway traffic. However, in some outlying areas, commercial properties may be clustered around recreational attractions such as a lake, park, resort or casino.

6. **Multi-family residential areas –** Apartment buildings and complexes can be interspersed in other commercial areas or in single family residential areas. They can also be located in primarily multi-family residential areas.

7. **Office/Commercial/Industrial parks –** A controlled park-like development designed to accommodate specific office, commercial and light industrial properties and containing the required utilities, streets and other appurtenances.

8. **Retail districts –** An outgrowth of the neighborhood shopping area, shopping centers are of eight main types, varying in size, variety of products and services, and importance of major tenants. The eight main types of shopping centers are strip, neighborhood, community, discount, outlet, power, regional and super regional.

9. **Strip shopping centers –** Strip shopping centers are usually found along major arterials or in proximity to other larger shopping center usages or commercial developments. They are usually less than 40,000 square feet in improvement size and provide for the personal services and day to day living needs of the immediate neighborhood. They do not have a "major" draw tenants.

10. **Neighborhood shopping center –** The neighborhood shopping center is much like the neighborhood shopping area with its convenience outlets, but with more parking space. This type of center has stores such as a supermarket, drug store, hair salon, barber shop, cleaners, and other local convenience stores. Neighborhood shopping centers have a typical improvement size of 60,000 square feet but in practice can range in size from 30,000 to 100,000 square feet.

11. **Community shopping center –** The community shopping center generally has a department store as the main tenant, a few apparel stores, shoe store, and other convenience stores such as a supermarket, drug store, hair salon, and restaurant, offering a wide range of products and services. This type of shopping center improvement is typically 150,000 square feet but in practice can range in size from 100,000 to 300,000 square feet. The development of discount centers has drawn customers away from the community centers.

12. **Discount shopping center –** The discount shopping center can be operated with a large chain such as K-Mart, Target, Shopko or Wal-Mart. It can also have a large discount store as the anchor tenant (Steinmart, TJ Maxx, Marshalls, Ross) along with several other smaller retail tenants. Discount centers offer a wide range of medium-priced goods and appeal to value oriented customers. Their improvement size is similar to community centers from 100,000 to 300,000 square feet.

13. **Outlet malls –** Outlet malls are alternatives to regional malls. They are destinations for local shoppers as well as tourists. They offer a wide range of stores selling apparel, furniture, home furnishings and sporting goods. Each store is characterized by specific brand identities. Goods are generally offered at prices discounted from normal department store prices. These malls are usually located on heavily traveled interstate highways and improvements can range in size from 250,000 to 1,000,000 square feet.

14. **Power centers –** Power centers are generally comprised of several large "big box" retailers ranging in size from 25,000 to 100,000 square feet each (e.g. Home Depot, Best Buy, Circuit City). They often share one centrally located parking area. However, not all big box retailers are in power centers, they may be stand-alone facilities with their own parking lots.

15. **Regional shopping centers –** The regional shopping center is often in direct competition with the central business district as well as community shopping centers as it provides two or more major department stores (anchor tenants), a full line of products and services, and even recreational facilities such as a movie theater or bowling alley. Regional shopping centers have a typical improvement size of 500,000 square feet but can range in size from 250,000 to 900,000 square feet.

16. **Super regional shopping centers –** The super-regional shopping center provides for extensive variety of general merchandise, apparel, furniture, and home furnishings, as well as a variety of services and recreational facilities. It is built around three or more full line department stores of generally not less than 100,000 square feet each in improvement size. In theory the typical improvement size of a super-regional center is about 800,000 square feet. In practice, the sizes range from about 600,000 to more than 1,500,000 square feet.

In many municipalities there are more than one commercial district or there are different types of commercial districts. The assessor should analyze each district in a manner similar to neighborhood analysis; noting the advantages and disadvantages of each district and any changes or trends. There are a number of questions that the assessor should ask when analyzing the district.

1. What type of district is this? Is it a retail, office, financial, or other type of district?
2. What types of customers are served by this district? What is the family income? How far do customers have to travel? Do existing stores meet the needs of the area?
3. What is the physical condition of the district? Are properties maintained, or left to deteriorate? Are vacant buildings increasing or decreasing in number?
4. What parking facilities are available? Many districts decline due to lack of adequate inexpensive parking.
5. What mass transit facilities are available?

These are some of the factors that the assessor should be aware of in analyzing commercial districts. Some factors may not be applicable in all cases and there may be additional factors that the assessor will discover in specific cases.

Market Area

Defining the market area is a critical step in assessing commercial properties and can be complex due to the wide variety of land uses encompassed in this classification. The assessor must identify those factors that most affect the actions of the typical buyer and seller for that specific use type. It is the responsibility of the assessor to first identify the typical investor for each property. This information will aid in determining both the market area and the valuation method most suited for estimating value of the particular property.

The primary factor influencing property values is usually its location. This is especially true of commercial property where even the side of the street on which a property is located is important. Location can affect the net return the property can generate and thereby influence demand. A higher net return will generally translate into higher market value.

In analyzing location, the assessor should note the location of competitive properties, and any other factors which affect the property value due to its location. The zoning of the property defines what uses are permissible. The size, shape, and soil conditions affect what improvements can be put on the property and at what cost. The condition, type of construction, and potential uses of the existing improvements also have an effect on value.

The type of property should also be considered in defining the market area. For example, with a four-unit apartment building the typical buyer is a local investor who purchases or invests in real estate in close proximity to similar properties, generally for the ease and convenience of maintaining and managing them in a more efficient manner. On the other end of the spectrum is the mega shopping mall. Here the typical investor is usually not local in nature and competes with other similar investments on a regional or national level. This means that for many properties, the assessor must look outside of the municipal boundaries for comparable property types and uses to find similar sales and leases.

By determining the typical investor for each property, the assessor can identify the market area and the valuation method best suited to value the specific parcel.

Data Collection

By statute, commercial property is to be assessed at market value; the most likely value the property would bring in an arm's-length transaction on the open market. For commercial property, value is dependent on both the physical characteristics of the property and the ability of the property to generate income. This means the assessor must gather sales data, lease information, expense data, and information on market rents. All of these are necessary in applying the three approaches to value in order to develop an opinion of value.

Whether commercial properties are comparable requires evaluation on a number of criteria. Does the potential comparable compete in the market place for the same investor dollars? Is it similar to the subject in expense ratio, investment risk potential, and income potential? Do the properties have similar physical characteristics and/or location factors? Are the income streams similar? The assessor must decide, based on the nature of the property, which of these factors are the best determinants of value as evidenced by the behavior of buyers and sellers in the open market. The factors having greatest effect on market value, combined with the quality of available data, will determine which approach (es) to value will render the most reliable value estimate.

Both sales data and rental information can be gathered by analyzing the Real Estate Transfer Returns and through discussions with appraisers, brokers, investors, and property owners. Tenants can be a good source of rental information. The assessor must also collect data about the local market, including information regarding trends. All data must be

evaluated for applicability and reliability. The effort expended by the assessor to become knowledgeable about sales and rental information will make the valuation of individual properties a less daunting task.

Valuation Techniques

Estimates of market value can be derived by using the cost, income and/or sales comparison approaches. Commercial property can be valued by either single property or mass appraisal techniques. However, due to the unique nature of each commercial property and the difficulty in obtaining pertinent data, it may take more in-depth analysis to apply mass-appraisal techniques to this property class.

Section 70.32(1), Wis. Stats., states "the assessor shall consider recent arm's-length sales of the property to be assessed if according to professionally acceptable appraisal practices those sales conform to recent arm's-length sales of reasonably comparable property; and all factors that, according to professionally acceptable appraisal practices affect the value of the property to be assessed." Therefore, the assessor should be aware of sales information and be able to apply the cost and income approaches, when applicable.

The value of commercial property is significantly influenced by its economic characteristics. The assessor must therefore be aware of the physical *and* economic characteristics of all commercial property sales. Because buyers and sellers of commercial properties usually base their transaction decisions on the property's net operating income, the assessor must be thoroughly familiar with the income approach. The cost approach is frequently used for new construction, special purpose properties (i.e., funeral homes, medical facilities) or when sales and income/expense information are not readily available or not appropriate.

The following discussion splits valuation into land and improvement valuation, as the assessor is required to separate each on the assessment roll. The principles and techniques described in WPAM Chapter 7-Real Property Valuation are applied to commercial property.

Land Valuation

Land value is a local product. It arises from supply and demand in the market where the property is located. The valuation of land must therefore be based on analysis of its local market.

Whether vacant or improved with buildings, land is valued as if available for development to its highest and best use--that most probable, legal use which will yield the greatest net return (highest and best use). This use must be acceptable to the market and must conform to existing zoning and land use ordinances. If an existing building cannot generate a return sufficient to support the land, the cost of demolition of the building must be deducted from the value of the land. For additional discussion on land valuation and highest and best use, see WPAM Chapter 8.

Land Value Factors

Commercial land is analyzed on the basis of its value not as raw land, but as a potential business location or building site. The following factors directly affect the value of commercial land and must be given consideration:

1. **Size -** The unit value (per front foot, per square foot, or per acre) of land generally decreases as the site area increases beyond the economic size typical for its highest and best use. Thus, a large site in an area where such holdings are not difficult to assemble, would have a lower per unit value than smaller, more readily marketable holdings.

   - **Plottage –** On the other hand, if the site is a large parcel in a congested area where it is difficult to assemble large holdings, then the reverse is true and the site would have a higher per unit value due to its increased utility. This is known as plottage. Examples of plottage are often found in central business districts or other congested areas where an owner or developer has been forced to pay premium prices to assemble a large piece of land. Thus, the size of a site will have an effect on its value, depending upon whether it is "wholesale" land or land that has added unit value because of plottage.

   - **Excess land –** Where a site is larger than is needed to efficiently operate the business, the assessor is confronted with the problem of determining the amount and value of the excess land. It is important to recognize excess land when valuing property as the value for such land is different than that for a site. A key to recognizing excess land is the land to building ratio. Land to building ratios can be studied to determine typical relationships between land and improvements for similar property types. The amount of excess land can be determined by first calculating the relationship between the typical site size and building area for the commercial neighborhood under consideration. Assume, for example, that the typical land to building ratio is 4:1 for similar buildings housing compatible businesses and that the subject property has a ratio of 16:1. The next step is to calculate the amount of land necessary to support the building on the subject lot and to represent a ratio of 4:1. If the building has a total floor area of 43,560 square feet, or one acre, then at the typical ratio of 4:1, it is necessary to have four times that amount, or a four-acre site to support this business. That leaves 12 acres of excess land. The excess land should be valued at a reduced rate as determined from the market.

     To arrive at the value of excess land, it will first be necessary to determine the per unit value for sites. To do this, the assessor analyzes sales that have no excess land to arrive at a unit value for comparable sites in the area. The next step is to analyze comparable sales with excess land. When analyzing these sales, the assessor would first determine the amount of the sale price attributable to that portion of the site necessary

to support the business. The remaining amount is the value attributable to the excess land. By doing this, for each sale with excess land, the assessor is able to arrive at a unit value for excess land.

2. **Shape –** The shape of a site is directly related to its adaptability for its highest and best use. For some buildings a parcel that is long and narrow or irregular in shape might be more adaptable than a rectangular parcel. The assessor must determine whether the shape of the site lessens its adaptability to its highest and best use or causes it to be more readily adaptable.

3. **Depth –** Depth has an influence on value due to the fact that the front portion of a lot usually has more value on a per unit basis than the rear. Depth tables can be used to provide a uniform basis for adjusting values of parcels varying from the standard depth; however, caution must be used. The importance of depth on the value of a site will not be the same for all commercial properties. For example, depth is more important for an apartment building than a gas station. Use of the same depth tables for both types of properties would be inappropriate. In addition, some properties, such as shopping centers, have parking at the front of the lot and the building at the rear. Since most of the value of the lot is in the rear where the building is situated, it is not appropriate to use depth tables in such a case.

4. **Access –** Commercial properties depend on pedestrian or vehicle access to the site; therefore, street width, sidewalks, and traffic patterns are all important factors to be considered. In areas where traffic is congested, the presence of an alley may enhance value since it facilitates delivery of supplies to the site.

5. **Parking –** Another important factor in the analysis of a site is available parking space. The number of potential customers is greatly limited without sufficient parking space located on the property or in the immediate area. The required amount of space is determined by the type of business occupying the site. If the type of business depends primarily on foot traffic, parking may not be an important factor.

6. **Topography –** Some sites require little or no preparation while others require extensive filling and grading. The effect of topography on adaptability to highest and best use must be recognized in analyzing the site.

7. **Utilities –** Public services to a property create value. A site with municipal water, sewer, gas, and electricity is more valuable than one without utilities.

8. **Exposure –** Many commercial enterprises rely on the advertising value of the site, based not only on location, but also on district zoning regulations such as setback requirements or limitations on size or placement of signs.

9. **Corner -** The assessor should be aware of the potentially higher value of corner lots in a commercial area. This higher value may arise because a corner location provides more air and light, easier access, and higher visibility which may attract more customers. These factors tend to enhance value; however, a corner lot is subject to more noise and traffic due to its location and this must also be considered by the assessor.

There are a number of methods that may be used to value corner lots:

1. Calculating the normal front street value adjusted for depth plus the normal side street value adjusted for depth.

2. The normal front foot value on the side street is added to the front foot value on the main street and this figure is multiplied by the number of front feet on the main street.

3. Another method is to add a flat percentage increase to the regular lot value.

The method used is dependent on how properties are being sold in the area. The assessor may discover through analysis of sales that corner lots in an area are of no greater value than regular lots.

Land Value Techniques

The valuation of land for commercial purposes should follow the procedures for valuing all other types of land. Commercial land is usually valued on a front-foot basis; however, land may also be valued on a per acre or square foot basis. The appropriate unit to be used will be determined by the way that land in the area is bought and sold.

There are a number of different methods available for the valuation of commercial land, including:

Sales comparison approach – If vacant land sales are available, the sales comparison approach can be used to estimate value by making adjustments for the differences between the sales and the subject property. This method provides the most accurate measure of land value and is the one most commonly used. It closely reflects the market because it follows the same procedure which investors use in choosing properties for purchase. Use of the sales comparison approach for the valuation of land is discussed in detail in WPAM Chapter 8.

An improved property purchased for redevelopment (where existing improvements are to be razed after sale), may be used as a vacant land sale. In this case, the cost of demolition, if paid for by the buyer, should be added to the purchase price of the property.

If there are no vacant land sales, other methods are available to estimate the value of commercial land, including the residual method, abstraction, the allocation method, the development method, and capitalization of ground lease.

Residual method – This method can be used to arrive at a land value in heavily built up areas where sales of vacant land cannot be found. When using the residual method a projection is made of the potential net income which a new building suited to the same use could produce. The income required by the building investment is deducted, leaving a residual income which is attributable to the land. This income is capitalized at the current market rate into an estimate of land value. This method is explained in more detail later in this chapter in the section dealing with the income approach to value.

Abstraction method – When the only sales available are those of improved property, a measure of land value can be gained using abstraction. When using this method, land value is measured from a known sale price by segregation of the amount which improvements contribute to the total. The remainder is assumed to be land value. The use of this method is discussed more fully in WPAM Chapter 8.

Allocation method – The allocation method (also known as the land ratio method) is premised on the notion that there may be a consistent overall relationship between land and improvement values for certain property types or in certain areas. From improved sales and a known land to building ratio, the assessor may be able to estimate the land value of a property. The use of this method is discussed more fully in WPAM Chapter 8.

Development method – Land with a potential use for industrial subdivision is often valued by this method. It involves making estimates of the value of the site fully developed for its highest and best use and deducting an estimate of the total cost of developing the site. The difference between the totals estimated for income and for expense is the value of the site as a whole. For more information on this method, refer to WPAM Chapter 8.

Capitalization of ground lease – This method assumes the gross rental under a ground lease is at current market levels. Net rental after deduction of the owner's expenses (insurance, management) is capitalized at an appropriate rate into an estimate of land value.

Example: Leased parking lot 30,000 square foot lot adjacent to an office building leased for employee parking for 5 years @ $2,000 per month.

Gross annual income	$ 24,000
Less expenses by lessor	
Liability insurance	4,000
Management	2,000
Total operating expenses	$ 6,000
Net annual income	$ 18,000

Capitalized value	$18,000	@ 12%	=	$150,000
Indicated land value				$150,000
Land value/square ft.	$150,000	÷ 30,000	=	$5.00 per sq. ft.

Valuing Improvements

The three approaches to value are the sales comparison, income and cost approach. This section will discuss application of the three approaches to the valuation of commercial property. The principles of the cost and sales comparison approaches are discussed in WPAM Chapter 7-Real Property Valuation and are not repeated here. The income approach is more fully explained in this chapter since it is more applicable to commercial property than other real property.

Sales Comparison Approach

The sales comparison approach should be used to arrive at market value if comparable sales data is available. It is the approach recognized by the courts as the preferred method of estimating market value provided the comparable sales are arm's-length transactions. The sales comparison approach has the advantage of reflecting the actions and decisions of buyers and sellers in the marketplace. The major difficulty with this approach is finding comparable sales. To be comparable, properties should be similar in both physical and economic characteristics including similarities in the ability to generate income and/or similar income streams.

Because of the wide variety of commercial properties it may be difficult to find comparable sales. For example, sales of gas stations or movie theatres are not appropriate for valuing small coffee houses. Sources for sales information would include buyers, sellers, brokers, appraisers, other assessors, professional organizations, and the Real Estate Transfer Return.

When using the sales comparison approach with leased properties, it is important to know the income and expenses of each property. A property that appears to be comparable may in fact not be if the income and/or expenses are not at market levels due to differences in the bundle of rights being transferred.

"Property that is encumbered by a bundle of rights must be appraised at its value using the current value of that bundle of rights" *City of West Bend v. Continental IV Fund, 193 Wis. 2nd 481, 535 N.W.2d 24 (Ct. App. 1995).* For further discussion of the bundle of rights see WPAM Chapter 7.

An adjustment to the sales grid should be made to reflect differences in rental income, especially where the primary purpose of the property is to generate rental income.

In applying the sales comparison approach it is important to determine the basis on which the sales will be compared. Retail stores may be sold on a per square foot basis while apartments, hotels, and motels may be sold on a per unit or per room basis.

For example, consider an apartment building containing 145, 1-bedroom units. All have a similar income potential to the subject. Each unit includes a stove and refrigerator. Three comparable sales are found:

Sale 1 contains 139, 1-bedroom units; the sale is 6 months old and it is determined that this would require a plus 5% adjustment; appliances are included; the location is judged to be 5% poorer than the subject; sale price is $2,502,000.
Sale 2 contains 158, 1-bedroom units; the sale is current and location is judged equal; appliances are not included and it is estimated that it would take $1,000 per unit to add the appliances; sale price is $3,002,000.
Sale 3 contains 131, 1-bedroom apartments; the sale is current and appliances are included; it is estimated that this location is 5% better than the subject; sale price is $2,751,000.

Adjustments are made to each sale price. The adjusted sale price is divided by the number of units to arrive at an estimated value per unit which can then be applied to the subject, giving an estimate of market value. The grid in Figure 9-1 shows one way this may be done.

Figure 9-1

	Sale 1	Sale 2	Sale 3
Sale price	$2,502,000	$3,002,000	$2,751,000
Number of units	139	158	131
Sale price/unit	18,000	19,000	21,000
Time	+900	Current	Current
Appliances	Yes	+1000	Yes
Location	+900	Same	-1,050
Total adjustments	+1,800	+1,000	-1,050
Adjusted sale price per unit	$19,800	$20,000	$19,950

Our analysis indicates the value of each unit is $20,000, thus the estimated value of the subject property is $2,900,000 ($20,000 x 145 units).

The major difficulty in applying this approach is finding truly comparable sales given the unique nature of commercial property. Even within a single block, a minor difference in location can significantly affect value, making adjustments difficult and sometimes questionable.

Gross Rent Multiplier

The gross rent multiplier (GRM) is used to provide a direct estimate of value based on the relationship between gross income and sale prices of similar properties. This method can also be considered a type of income approach. The GRM is simply the sale price divided by the annual or monthly gross income. For example, if the sale price of a property is $400,000 and the gross annual income is $50,000 the annual GRM is the following:

$$\frac{\text{Sale Price}}{\text{Annual Income}} = \frac{\$400{,}000}{\$50{,}000} = 8\,(\text{GRM})$$

After calculating the gross rent multipliers for a number of similar properties the assessor can determine which GRM is most appropriate for the subject. It is important that the assessor use properties of a similar nature. By using comparable properties the assessor should be able to derive gross rent multipliers which fall into a narrow range (see Figure 9-2).

Figure 9-2

Sale	Sale price	Annual income	GRM
1	$500,000	$70,400	7.1
2	$475,000	$69,900	6.8
3	$525,000	$76,100	6.9
4	$450,000	$62,500	7.2

In the above example, after analyzing the sales and comparing them with the subject the assessor may decide that the appropriate GRM is 7. If the gross income is $65,000 then the value of the subject is $65,000 x 7 = $455,000.

The gross rent multiplier can also be applied to monthly rentals. The only difference is that the monthly GRM is 12 times the annual GRM. The advantage is that when an assessor is working with monthly rental figures it is easier to use a monthly GRM than to multiply the monthly figures by 12. The gross rent multiplier is often used as an income approach in valuing residential property and 1 to 3-unit apartment buildings.

Cost Approach

The cost approach can be used when valuing properties for which there is inadequate sales information. This approach can be used for such properties as banks, corporate offices, and other special purpose uses. The cost approach is the value of the land plus the cost of the improvements minus any depreciation. The mechanics of the cost approach are explained in the WPAM Chapter 7. There are commercially available cost manuals which provide cost tables, depreciation and area modifiers for use in the cost approach.

The assessor should be aware of the difference between cost and value. There are situations where items are included in the building cost for which the average purchaser would not be willing to pay. An example would be the construction of a corporate headquarters which included a massive fountain in the shape of the company's distinct logo. This feature would have little value, and may actually be a detriment, at the time of sale.

Income Approach

When comparable sales are not available, the income approach is usually the best method for estimating the value of commercial property. The income approach may frequently be the most reliable method for estimating the value of commercial property because it represents the way investors think when they buy and sell income property in the market.

Because the income approach generates a value based on the income generating potential of a property, it is particularly reflective of the value buyers place on property used for rental purposes.

Value can be defined as "the present worth of anticipated future benefits." While this is true of all approaches to value, this definition is particularly useful in applying the income approach. The income approach is the process of converting anticipated future benefits (income) into an estimate of the present worth of the property.

There are two primary ways to implement the income approach: the capitalized income method (also known as direct capitalization) and the discounted cash flow (DCF) method. Residual techniques, while used less frequently, can also be used to estimate property value. The discounted cash flow method and the residual technique are discussed later in this chapter.

Direct Capitalization

Direct capitalization converts a single year's net operating income into an estimate of value. This conversion process is called capitalization. Direct capitalization is appropriate when two conditions are met: 1) the investment opportunities provided by the properties being appraised are similar to those provided by reasonably comparable income-producing properties and 2) a consistent pattern of overall rates (multipliers) emerges during analysis of income-producing properties.

The eight steps to applying the capitalized income approach are:

1. Estimate potential gross income
2. Deduct for vacancy and collection loss
3. Add miscellaneous income
4. Calculate operating expenses
5. Subtract operating expenses to derive net income
6. Select an appropriate capitalization method
7. Derive the capitalization rate
8. Apply the capitalization rate to net income to arrive at a value estimate

In each of the steps the assessor must be aware of market conditions and trends. The information used in the income approach must be obtained or verified by what the assessor finds in the marketplace.

Market Rent vs. Contract Rent

Market rent and contract rent may be one and the same in some instances. However, this is not always the case. *The Dictionary of Real Estate Appraisal* defines market rent as, "The most probable rent that a property should bring in a competitive and open market reflecting all conditions and restrictions of the lease agreement, including permitted uses, use restrictions, expense obligations, term, concessions, renewal and purchase options, and tenant improvements." Market rent can be determined through analysis of rental data of comparable sold properties or properties in the market area. Contract rent is defined as,

"The actual rental income specified in a lease." Or, "The rent specified by a given lease arrangement..." In some instances contract rent may equal market rent, but not in all instances. Contract rent in some instances may different substantially from market rent due to terms or conditions of the lease, particularly for older leases with fixed rental terms. Contract rent may, or may not, reflect market rent for a given property. There are numerous reasons for discrepancies between contract and market rents. Some examples are:

- rental rates for subsidized housing which are generally below market
- long-term tenants, particularly long-term residential tenants, are sometimes given rent reductions/incentives to renew their lease
- changes in market conditions since a multi-year lease was signed
- items and/or services in the lease payment which are not directly related to the real property itself
- circumstances of the lessee or lessor which motivated them to enter into a lease with disadvantageous terms (not arm's-length)

The basis of the income approach is to apply a capitalization rate to estimated income in order to derive a value for the property. Capitalization rates are typically developed by calculating the ratio of contract rents for recently sold properties to the sales price of the property. Contract rent is used to develop the capitalization rate under the premise that buyers and sellers considered contract rent when entering into the sales agreement. In essence, the capitalization rate is based on contract rent. It therefore makes sense for the assessor to apply the capitalization rate to the contract rent of the subject in developing the value estimate.

While the assessor should consider contract rent, there are times when 'market rents' are a more reliable indicator of property value and should be applied. Examples are:

- Current leases of the subject are market rents
- Leases that are not 'arm's-length' transactions
- Owner occupied properties
- Leases that include items not related to the real property
- Short term leases that clearly do not reflect market value for whatever reason

In these situations the assessor must estimate the market value of potential rent. Many times, the assessor determines market rent through analysis of existing leases (contract rent) on recently sold properties. Essentially this results in market rents being driven by contract rents.

When using contract rents, the assessor should carefully review the leases and subtract any amounts in the lease fee that are not directly attributable to rental of the real property. This can include unusual services or other items such as finance charges. It is the burden of the property owner to prove that lease amounts include items not related to the real estate. When using contract rents, the assessor should apply actual, not estimated, operating expenses to derive net income.

The assessor should also consider the value of those non-realty items that become inextricably intertwined with the property. These items, though not real estate proper, enhance the value of the real estate at time of sale in such a significant way that they alter the behavior of buyers and sellers in the transaction. For example, a sale in which a license to use the particular parcel in a particular manner (such as a landfill) adds considerable value to the property, the license becomes inextricably entwined with the value of the parcel itself though a license it not typically considered 'real property' in traditional terms. When the existence of 'non-realty' items passes with the property and significantly influences the behavior of the typical buyer and seller, the assessor should include it in the value estimate.

Section70.32 (1), Wis. Stats., states, "Real property shall be valued by the assessor in the manner specified in the Wisconsin property assessment manual provided under sec. 73.03 (2a) from actual view or from the best information that the assessor can practicably obtain, *at the full value which could ordinarily be obtained therefor at private sale*". [Emphasis added]

In selecting a capitalization method, and in determining whether to use contract or market rents, *the assessor must always bear in mind that the end result should be an assessment that represents the most probable selling price of the property in an arm's-length transaction in the open market.*

Note: **Throughout the remainder of this chapter, references to 'market rent' should be interpreted to mean market rent or contract rent, whichever is most appropriate.**

Potential Gross Income

Potential gross income is the income that would be generated if a property was 100 percent occupied and receiving rent. The following example illustrates how potential gross income can be estimated. Assume that the assessor is valuing an apartment building containing 20, 1-bedroom apartments that rent for $500 per month. An analysis of three similar apartment buildings reveals the following information:

Apartment	Number of units	Rent per unit
1	25	$530
2	20	$525
3	15	$520

After an analysis of the other apartments the assessor decides that apartment building 2 is the most comparable and that the subject apartment building should rent for $525 per month. Thus the potential gross income is:

20 units x $525 = $10,500 x 12 months = $126,000

Vacancy and Collection Loss

Rental properties are rarely fully occupied during their rental life; therefore, a deduction should be made from the potential gross income to compensate for lost income due to vacancies. This vacancy allowance can be determined by an analysis of the vacancy factors of other comparable properties and the recent vacancy history of the subject property. Care should be taken to make sure the noted vacancies are from stabilized projects. The assessor should also consider whether there would be any future construction of competitive properties.

The vacancy factors of comparable properties can be determined by dividing the number of vacant units by the total number of units. The assessor should also know how long the units are vacant. Units may not be vacant for a full year. Other ways to calculate a vacancy factor include: dividing the amount of vacant square feet by the total leasable square feet in the property or dividing the total rent lost for the vacant space by the gross potential income of the property. By analyzing these vacancy factors and other factors mentioned above and comparing them with the subject property the assessor should arrive at a vacancy factor that can be applied to the subject property.

To continue with the example of a 20-unit apartment building the assessor finds the following information:

Apartment	Number of units	Vacant units	Per cent vacant
1	25	1	4.0%
2	20	1	5.0%
3	15	1	6.7%

The subject 20-unit building has one vacancy, or a vacancy rate of 5% which is appropriate when compared with the market information.

The collection loss is the loss incurred as a result of the tenants' failure to pay their rent. In determining this loss, the assessor should analyze the collection loss experienced by comparable properties as well as the subject property, to arrive at a justified allowance for the subject property. The collection loss does not include the rent that is not received from vacant apartments; this is included in the vacancy factor.

Using the same example, the following data is collected:

Apartment	Rents receivable	Collected rents	Uncollected rents	Collection loss (%)
1	$166,500	$164,445	$1,795	1.1%
2	151,300	149,705	1,595	1.1%
3	136,960	135,603	1,357	1.0%

The collection loss percentage is the uncollected rents divided by the potential gross income. Apartment building 1 has a potential gross income of 25 units x $555 x 12 months = $166,500. Thus, $1,795 divided by $166,500 = 1.1%. This is done because the collection loss is deducted from potential gross income. In this example it could be reasoned that a collection loss of 1% is appropriate. The collection loss of 1% is added to the 5% vacancy factor to give a vacancy and collection loss of 6%.

Miscellaneous Income

This is the income that is received from sources other than rent. Examples of miscellaneous income include parking, coin operated laundries, and rental of clubhouses or party rooms.

CAUTION: Be sure that assessable items of personal property such as coin-operated washers and dryers are not double assessed. If the income and expenses from such items are included in the income approach when valuing the real estate, be sure that they are not also assessed as personal property.

At this point the assessor can estimate potential gross income, deduct the allowance for vacancy and collection loss, and add any miscellaneous income to arrive at the effective gross income.

In the previous example, there is one parking stall for each of the 20 units. The stalls rent for $20 per month. The miscellaneous income is computed as follows:

20 stalls x $20 per month x 12 months = $ 4,800

The effective gross income for the 20-unit apartment building can now be calculated.

Potential gross income	$126,000
Less: vacancy and collection loss (6%)	7,560
	$118,440
Plus: miscellaneous income (Parking)	4,800
Effective gross income	$123,240

The next step is to determine operating expenses.

Operating Expenses

These are expenses which are typically borne by the owner in properties of the type involved in the current, local market. The assessor must consider only those expenses which are applicable to the cost of ownership. Any portion of the expenses incurred either directly or indirectly by the tenant need not be considered. Reimbursed expenses can only be considered when the amount of reimbursement is included as income.

All expense items must stand the test of both legitimacy and accuracy. They should be consistent when compared with established guidelines and norms, and also with expenses incurred by comparable properties.

Operating expenses can be divided into fixed charges, variable charges, repairs and maintenance, and replacements. Fixed charges include expenses which do not vary with occupancy, such as insurance and real estate taxes. Variable charges are those which vary with occupancy, such as management fees, utilities, heating and air conditioning expenses, and miscellaneous expenses. Repairs and maintenance refers to charges incurred for minor repairs and maintenance, and are generally prorated on an annual basis. Replacements, which is also referred to as "reserves for replacements" refers to the amount set aside annually to provide for the replacement of items which are usually replaced before the end of the economic life of a building. Reserves may be set aside for capital expenditures such as roofs or mechanical systems. In certain markets and with certain property types, there may also be reserves set aside for interior alterations. The inclusion or exclusion of reserves in the operating statement will also depend on the capitalization rate used in the analysis. A reserve amount may already be reflected in a market-derived capitalization rate.

Fixed Charges

Insurance. As is the case of some other expense items, the amount reported for insurance in any given year may not be indicative of the actual annual expense. Many owners obtain the more economical three-year coverage plans and expense the entire premium in one year. Furthermore, many owners obtain "blanket" coverage for more than one building and fail to make the proper allocations of cost. It is generally more effective for the assessor to establish local guidelines, including only items applicable to real estate. Fire, extended coverage, and owner's liability are the main insurance expense items. Separate coverages on different components of the building such as elevators and plate glass are also legitimate expenses.

Real estate taxes. In making appraisals for tax purposes, it is more equitable to exclude the actual amount reported for real estate taxes. Since future taxes will be based upon the appraised value, the assessor can readily provide for this expense item by including it in the capitalization rate.

Variable Charges

Administrative or Management fees. These fees 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 assessor. Also, if the property owner pays himself/herself a fee that is not at market levels, this figure should be adjusted to reflect market levels. Management fees may include administration costs such as advertising and accounting. On the other hand, if excessive management charges are reported, as is often the case, the assessor must disregard the reported charges and use an amount which is deemed 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 rent collected. Management fees may also vary depending on other factors such as building size, property type, or complexity of assignment.

Utilities. Utilities are generally legitimate expenses and if reported accurately, need very little reconstruction by the assessor, other than to determine if the charges are consistent

with comparable properties. Included in this category are water, sewer charges, electricity, etc. Local utility companies can provide the assessor with definite guidelines for reasonable and typical utility expenses.

Heating and air conditioning. Heat and air conditioning costs may be reported separately and in addition to utilities. The expenses would include the cost of fuel, and may include, especially in large installations, the cost of related supplies, inspection fees, and maintenance charges. These types of costs may also be included in general or repairs and maintenance expenses. These are generally legitimate costs and the same precautions prescribed for utilities apply.

General expenses. General expenses include such items as the cost of services and supplies not charged to a particular category, wages, unemployment and F.I.C.A. taxes, Workmen's Compensation, other employee insurance plans and advertising. All of these expenses are legitimate deductions.

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

Repairs and Maintenance

This category includes expenses incurred for minor repairs and maintenance necessary for the continual operation of the property. This would include minor roof repairs, minor repairs to the heating system, replacement of broken windows, and other relatively minor but required repairs.

Janitorial expenses are also legitimate charges. They are 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 services may be provided by outside firms working on a "contract" basis. Janitorial 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 assessor should have little difficulty in establishing local guidelines.

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. However, if periodic interior alterations are required to maintain the income stream, and if the marketplace regularly considers such costs, a reserve for these costs may be warranted. The assessor should use caution before such a reserve is included as an operating expense. Market participants may view these costs as capital expenditures and not normally provide for a reserve account for them. As noted previously, the inclusion

or exclusion of reserves in the operating statement will also depend on the capitalization rate used in the analysis. A reserve amount may already be reflected in a market-derived capitalization rate.

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

Repair and maintenance expenses reported for any given year might 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); yet the statement for the following year may indicate that repairs and maintenance charges were practically nil.

Replacement Reserves

This category includes those items of a building that are usually replaced before the end of the economic life of the building, but are not in need of immediate repair. Some items of this type would include washers, stoves, refrigerators, elevators, heating and air conditioning, and the roof. Care must be taken to determine if the reserve items are considered real property or personal property. As noted previously, the periodic cost of interior alterations may also be considered as a reserve item, in some markets and with certain property types.

The process for calculating the reserve fund is:

1. Estimate replacement cost new.
2. Estimate the economic life of the item.
3. Determine the yearly percentage allotment by dividing 100 percent by the economic life.
4. Multiply the replacement cost new times the percentage calculated in step 3 to determine the yearly reserve figure.
5. Determine what percentage of effective gross income the market typically includes in its operating statement.

To illustrate this method, assume that an apartment building has an economic life of 30 years. The heating system has an economic life of 20 years. The estimated replacement cost new of the heating system is $10,000. The annual replacement percentage is 5 percent (100 percent divided by 20 years). The annual reserve for replacement would then be $10,000 times 5 percent or $500.

Excluded Expenses

When analyzing an owner's operating statement, there are some expense items which the assessor should disregard. The question may then come up: why ask for the information if we do not intend to use it? The answer is that expense forms should be designed to accommodate property owners and/or accountants. Their records include these categories,

and if space is not provided to enter these items on the form, they have the tendency to either lump all of them under "Miscellaneous" or to include them in other categories, making it difficult for the assessor to abstract the legitimate deductions. Specific items which are not allowable expenses include taxes which do not pertain to real estate, depreciation, interest, and capital improvements.

Other taxes. Expenses reported in this category such as income taxes, corporate taxes and franchise taxes, usually do not pertain to the real estate and should, therefore, be disregarded.

Depreciation. The assessor provides for this expense by the recapture rate which is included in the building capitalization rate. The amount reported for depreciation is a bookkeeping figure which the owner uses for Internal Revenue purposes and should not be considered in the income approach.

Interest. Interest on borrowed capital is not a legitimate expense. All property is assessed as if it were free and clear of all liens and encumbrances. It makes no difference to the assessor whose money is used for purchasing the property. Interest paid for borrowed capital isn't a deductible expense since interest on the total investment, as a normal return, is considered in the capitalization rate.

Land rent. Land rent is paid in lieu of purchasing the land and is generally not considered an expense item in the capitalization process.

At this point the assessor can total all of the legitimate expenses and deduct them from the effective gross income. The result is called the net operating income or net income. Figure 9-3 is an example of an income and expense statement of an apartment complex received from a property owner and Figure 9-4 shows the statement as reconstructed by the assessor to reflect market conditions.

Figure 9-3
Owner's Income and Expense Statement

Income		$120,000
Expenses:		
Property taxes	15,000	
Mortgage payments	25,000	
Depreciation	20,000	
Management (7%)	8,400	
Utilities	4,000	
Insurance (3 year premium)	5,400	
New roof	25,000	
Minor repairs and maintenance	4,445	
Advertising	2,389	
Paint five units	1,900	
Total expenses		$111,534
Net income (Loss)		$8,466

The reasoning behind the assessor's reconstruction of the income and expense statement is as follows.

Income. The owner's statement reflects the actual rental of 20 units at $525 per month plus the miscellaneous parking income. The reconstructed statement reflects the market or contract rent (which is applicable) less an appropriate amount for vacancy and collection loss plus miscellaneous income. This procedure was explained earlier in this section.

Figure 9-4
Reconstructed Income and Expense Statement

Potential Gross Income		
20 units x $525 (economic rent) x 12 months		$126,000
Less: Vacancy and collection loss (6%)		$ 7,560
		$118,440
Plus: miscellaneous income		
(Parking - 20 stalls x $20 x 12 months)		$ 4,800
Effective gross income		$123,240
Operating expenses		
Fixed		
Insurance	$1,800	
Variable		
Management (7% x $118,440)	8,291	
Utilities	4,000	
Advertising	2,389	
Minor repairs and maintenance	4,445	
Painting (20 units x $380 ÷ 3 years)	2,533	
Replacements (2% EGI)	$2,465	
Total operating expenses		$ 25,923
Net income		$ 97,317

Expenses. Property taxes are included in the capitalization rate. Mortgage payments and depreciation are not appropriate deductions.

Insurance. Since the insurance is purchased for a three-year period, the $5,400 is divided by 3 to give the property expense for one year. Thus, only one-third of this item is included in the reconstructed statement.

Management. A deduction for management is appropriate and the 7% represents an amount that the assessor has found typical of the market. The 7% is based on the $118,440 rent collected.

Utilities. Utilities are a necessary and allowable expense.

Advertising. Advertising is a normal expense and is allowed.

Minor repairs and maintenance. This represents repairs to plumbing, broken windows, and other minor items. Painting could be considered a normal maintenance item; however it is included separately in this example.

Replacements. Roofs are treated as "reserves for replacements." The replacement cost for a new roof is estimated and this estimate is divided by the economic life to give a figure representing one year's cost for this item. However, there are other items which could be included in replacements (carpeting, mechanical systems, etc.). In this case, a market derived rate of 2% EGI is added to the operating statement.

The example is given to show the assessor the problems that can be encountered when dealing with prepared income statements. While the owner's statement may be acceptable for income tax purposes, it may require adjustments to make it useful for valuation of the real estate. This should not discourage the assessor from gathering this information from owners, because it can provide useful information when carefully analyzed.

Income capitalization

Capitalization is the process of converting net income into an estimate of present value. This is done by using the formula:

$$\frac{I}{R} = V$$

I is the net income, R is the capitalization rate, and V is the value. The method of obtaining the net income has been discussed. The next step is the derivation of the capitalization rate often called the "cap rate."

A capitalization rate is not explicitly a measure of profitability (return on investment). It is simply a ratio between the net operating income and the sale price (property value). As shown in the table below, an overall cap rate can be higher, lower or the same as an overall yield rate. The overall yield rate is the required return an investor expects to be generated from his/her investment. The relationship between a capitalization rate and a yield rate depends on future income expectations. If net operating income (NOI) and property value are expected to increase in the future (Investment 1) then the cap rate will be lower than a yield rate. If the NOI and property value are expected to decrease (Investment 2) then the cap rate will be higher than the yield rate. If the NOI and property value remain unchanged (Investment 3) then the cap rate and the yield rate will be the same.

Overall Return Comparison

	Initial Amount Invested	Year 1 NOI	Year 2 NOI	Year 3 NOI	Year 3 Reversion
Investment 1	-$ 20,000	$ 1,000	$ 1,200	$ 1,400	$ 22,700
Investment 2	-$ 20,000	$ 2,800	$ 2,600	$ 2,400	$ 18,000
Investment 3	-$ 20,000	$ 2,000	$ 2,000	$ 2,000	$ 20,000

Actual Overall Return Measures

	Yield rate (IRR)[1]	Overall Cap Rate (NOI Year 1/Investment	
Investment 1	10%	5%	($1,000/$20,000 = 5%)
Investment 2	10%	14%	(2,800/$20,000 = 14%)
Investment 3	10%	10%	($2,000/$20,000 = 10%)

[1] An internal rate of return (IRR) is the rate of return that discounts all expected future cash flows to a present value equal to the original investment. Cash flows include the annual cash flows and proceeds from a sale at the end of a holding period (reversion)

Yield Rate – IRR Calculation: Investment 1

	Cash flows	PV factor @ 10%	PV of cash flows[2]
Year 1	$ 1,000	0.90909	$ 909
Year 2	$ 1,200	0.82645	$ 992
Year 3	$ 24,100	0.75131	$ 18,107
	[2] Total slightly off due to rounding		$ 20,008

The capitalization rate is calculated by dividing the first year NOI by the initial amount invested. The yield rate, as used in this example, is the same as an internal rate of return (IRR). An IRR is the rate of return that discounts all expected future cash flows to a present value equal to the original investment (example shown in table). In these examples, cash flows include the net operating incomes (NOIs) for years 1, 2 and 3 and the proceeds from selling the investment at the end of year 3 (known as reversion). None of these examples take into account the impact of debt. If a loan is amortized, the amount of equity will increase as the loan principal is paid off. This equity build up is another way additional yield is generated.

There are several ways to determine cap rates. The most common ways are to calculate them from arm's-length sales of similar properties or from the band of investment formula.

To the cap rate, assessors also should add an effective tax rate. This is known as loading the cap rate. If properties are normally reassessed at their sale prices (assuming the sale is arm's-length) each year, then the assessor should reflect the proper amount of real estate taxes based on the sale price of the property. To consider the proper amount of real estate taxes by loading the cap rate, the assessor should exclude real estate taxes from the operating expenses and add the effective tax rate to a market derived capitalization rate. As seen in the tables below, the assessor obtains the same property value whether the cap rate is loaded by the effective tax rate or the proper amount of real estate taxes are included in the operating statement. Both examples in the table below are exactly the same *except* that in example #1, real estate taxes are included as an expense in the operating

statement. The amount of real estate taxes included in example #1 is based on an assessed value of $747,000 and an effective tax rate of 2.0%. In example #2, the real estate taxes are included in the cap rate by loading the cap rate by the effective tax rate of 2.0%.

Example #1		
Gross Rents	$	92,000
Vacancy	$	(1,000)
Effective Gross Income	$	91,000
Operating Expenses		
All expense except RE taxes	$	20,000
Real Estate Taxes	**$**	**14,940**
Total Operating Expenses	$	34,940
Net Operating Income	$	56,060
Capitalization Rate		**7.5%**
Derived Value, rounded	**$**	**747,000**
RE taxes at derived value, 2% mill rate	**$**	**14,940**

Example #2			
Gross Rents		$	92,000
Vacancy		$	(1,000)
Effective Gross Income		$	91,000
Operating Expenses			
All expense except RE taxes		$	20,000
Real Estate Taxes			
Total Operating Expenses		$	20,000
Net Operating Income		$	71,000
Capitalization Rate			**9.5%**
Market derived cap rate	7.5%		
Mill rate	2.0%		
Derived Value, rounded		**$**	**747,000**
RE taxes at derived value, 2% mill rate		**$**	**14,940**

Capitalization Techniques

There are a number of methods of capitalization that will be covered in this section. All of the methods are based on the formula:

$$\frac{I}{R} = V$$

Where I is the net income, R is the capitalization rate, and V is the value.

For example, assume that an apartment building generates $30,000 in net income per year and that the correct capitalization rate is found to be 12 percent.

$$\frac{\$30{,}000 \text{ (Income)}}{.12 \text{ (Rate)}} = \$250{,}000 \text{ (Value)}$$

This formula can be used to determine any one of the three elements when the other two are known. If the assessor wants to determine the rate and knows the income and value the formula is:

$$\frac{I}{V} = R$$

In our example if the value is $250,000 and the income is $30,000 the rate is then:

$$\frac{\$30{,}000 \text{ (Income)}}{\$250{,}000 \text{ (Value)}} = 0.12 \text{ (Rate)}$$

If the value and rate are known the income can be determined by:

$$V \times R = I$$

Again in our example if we know the value is $250,000 and the rate is 12% the income is then:

$250,000 (Value) x .12 (Rate) = $30,000 (Income)

All capitalization methods are based on these three formulas. The knowledge of these formulas is basic to the understanding of the following methods.

Market Derived Capitalization Rates

This is the most reliable method to use to estimate a capitalization rate because it reflects market behavior. From recent market value sales of similar properties, the assessor determines a single overall capitalization rate. The net income for each property is divided by the sale price to arrive at an overall rate of return. This is based on the formula:

$$\frac{I}{V} = R$$

When calculating capitalization rates from sales, it is imperative that the assessor use a consistent methodology. As shown in the following example, the resulting capitalization rate can vary significantly depending on what operating expenses are included. The assessor should only include those operating expenses that are considered appropriate for the property type and market.

The property in the next example sold for $775,000 and was most recently assessed for $600,000. Three different capitalization rates can be derived. The first scenario shows a cap rate of 8.17% derived from the unadjusted financial data submitted by the seller of the property. The submitted operating expenses do not include management fee or replacement reserves. If these expenses are considered typical for this property type and in this market, they should be included as operating expenses. Adjustment #1 includes the missing operating expenses (management fee and replacement reserves) and has a resulting capitalization rate of 7.25%. Adjustment #2 includes the added management fee and

replacement reserves and adjusts the real estate taxes to reflect what they would be based on the sale price of the property. The resulting capitalization rate is 6.8%.

Which cap rate the assessor uses depends on what is typically included as operating expenses in an operating statement. If properties are normally reassessed at their sale prices (assuming the sale is arm's-length) each year, then the assessor should reflect the proper amount of real estate taxes in the operating statement. This is the same thing as loading the cap rate. If the assessor normally includes a management fee and replacement reserves in the operating statement, then those expense items should be included when calculating the market derived capitalization rate.

Sale Price:	**$ 775,000**
RE taxes on sale price	$ 15,500
Current Assessment	**$ 600,000**
RE taxes on current assessment	$ 12,000

Adjustments #1: Added replacement reserves and management fee
Adjustments #2: Same as #1 plus included RE taxes based on sale price

	As Submitted Current Year		**Adjusted #1**		**Adjusted #2**	
Gross Rents	$ 92,000		$ 92,000		$ 92,000	
Vacancy	$ 0		$ 0		$ 0	
Other Income	$ 2,500		$ 2,500		$ 2,500	
Effective Gross Income	$ 94,500		$ 94,500		$ 94,500	
Operating Expenses		%EGI		%EGI		%EGI
Administrative	$ 500	0.5%	$ 500	0.5%	$ 500	0.5%
Management Fee	$ 0	0.0%	$ 4,725	5.0%	$ 4,725	5.0%
Repairs/Maintenance	$ 10,000	10.6%	$ 10,000	10.6%	$ 10,000	10.6%
Utilities	$ 6,000	6.3%	$ 6,000	6.3%	$ 6,000	6.3%
Insurance	$ 2,500	2.6%	$ 2,500	2.6%	$ 2,500	2.6%
Replacement Reserves	$ 0	0.0%	$ 2,363	2.5%	$ 2,363	2.5%
Other	$ 200	0.2%	$ 200	0.2%	$ 200	0.2%
Real Estate Taxes	$ 12,000	12.7%	$ 12,000	12.7%	$ 15,500	16.4%
Total Operating Expenses	$ 31,200	33.0%	$ 38,288	40.5%	$ 41,788	44.2%
Net Operating Income	$ 63,300		$ 56,213		$ 52,713	
Sale Price	$ 775,000		$ 775,000		$ 775,000	
Derived Capitalization Rate:	**8.17%**		**7.25%**		**6.80%**	

The assessor would then select the rate that is the most appropriate for the subject property. As an example, assume the assessor has discovered the following information:

Sale	Net Income	Sale Price	Overall Rate (%)
1	$27,500	$250,000	11.00
2	28,875	275,000	10.50
3	27,950	260,000	10.75

Through an analysis of the sales the assessor finds that Sale 3 is the most comparable. Thus, the appropriate capitalization rate is 10.75%. If the subject has a net income of $28,000 the value would then be:

$$\frac{\$28{,}000}{.1075} = \$260{,}465 \text{ or } \$260{,}500$$

In order for this method to be of use, the properties must be comparable. The properties should serve the same market, attract similar investors, have similar operating expense categories and income streams, have similar physical conditions, and similar land-to-building ratios. For example, if a comparable property's net operating income does not reflect a management fee or replacement reserves, the capitalization rate may not be appropriate to use for a property whose operations do include these expenses items.

The properties should also have similar future net income expectations. A capitalization rate derived from a property whose net income is expected to decline in the future may not be comparable to a property whose net income is expected in increase. Similarly, if a property has below market leases, the derived capitalization rate may not be appropriate to apply to a property whose leases are at market levels.

If these conditions are met this method can be used. The advantage of this method is that the information is obtained from the market, and eliminates many potential errors in judgment by the assessor.

With certain types of properties, the assessor may also rely on published secondary sources of capitalization rates (such as the Investment Bulletin from the American Council of Life Insurance or *Korpacz Real Estate Investor Survey from Price Waterhouse Coopers).* Before using these sources, however, the assessor should understand how and from where the capitalization rates are derived. For instance, the assessor should understand if there are replacement reserves and management fees included when calculating the capitalization rates. Many times the capitalizations rates are derived from large "Class A" or investment grade properties which may not be comparable to smaller, less desirable properties.

Mortgage-Equity Method (Band of Investment)

This method is based on the premise that an overall rate can be developed through a knowledge of the mortgage and equity requirements of property purchase. Commercial property is often purchased with a combination of debt and equity. So the property's value is directly related to how much debt and equity the property's net operating income can support. A capitalization rate derived by the band of investment (mortgage-equity method) reflects these two components. The band of investment method (mortgage equity method) can be beneficial to use if the interest rate on the existing mortgage on the property is

different from current market level interest rates and if the existing mortgage must be assumed by the buyer.

After the market-derived rate method, the mortgage-equity method is most commonly used. Its simplest application is a band of investment method. The assessor needs to know what percent of value (loan to value ratio or LTV) the lending institutions require as a down payment, or equity from investors. The assessor also needs to know the interest rate and amortization terms required on mortgages by lending institutions, and the equity capitalization rate (also known as the equity dividend rate or cash on cash rate) required on the equity by investors.

An equity capitalization rate is not the same as an equity yield rate. It is simply a ratio between the first year's equity dividend and the amount of equity invested. The equity dividend is the amount of cash available to the owner *after the annual debt service is paid* (also known as the before tax cash flow or cash throw off). An equity yield rate is the required rate of return an investor expects to be generated from his/her *equity* investment. The equity investment might be the amount of the down payment required when the property has a mortgage. The equity reversion is the amount the investor would obtain when he/she sells the investment at the end of the holding period (*after any outstanding loan balance is paid off).*

Net Operating Income
- Annual Debt Service (Mortgage Payments)
= **Equity Dividend (before tax cash flow, cash throw off)**

Equity Return Comparison

	Initial Equity Invested	**Year 1 Equity Div**	**Year 2 Equity Div**	**Year 3 Equity Div**	**Yr. 3 Equity Reversion**
Investment 1	$ (10,000)	$ 500	$ 600	$ 700	$ 11,350
Investment 2	$ (10,000)	$ 1,400	$ 1,300	$ 1,200	$ 9,000
Investment 3	$ (10,000)	$ 1,000	$ 1,000	$ 1,000	$ 10,000

Actual Equity Return Measures

	Yield Rate (IRR)[1]	**Equity Dividend Rate (Equity Cap rate)**	
Investment 1	10.0%	5.0%	($500 / $10,000 = 5.0%)
Investment 2	10.0%	14.0%	($1,400 / $10,000 = 14.0%)
Investment 3	10.0%	10.0%	($1,000 / $10,000 = 10.0%)

[1] An internal rate of return (IRR) is the rate of return that discounts all expected future cash flows to a present value equal to the original investment. Cash flows include the annual equity dividend and equity proceeds from the sale at the end of a holding period (reversion).

Equity Yield Rate - Equity IRR Calculation: Investment 1

	Cash Flows	PV Factor @ 10%	PV of Cash Flows[2]
Year 1	$ 500	0.90909	$ 455
Year 2	$ 600	0.82645	$ 496
Year 3	$ 12,050	0.75131	$ 9,053
	[2]Total slightly off due to rounding		$ 10,004

Equity Return Comparison

	Initial Equity Invested	Year 1 Equity Div	Year 2 Equity Div	Year 3 Equity Div	Year 3 Equity Reversion
Investment 1	$ (10,000)	$ 500	$ 600	$ 700	$ 11,350
Investment 2	$ (10,000)	$ 1,400	$ 1,300	$ 1,200	$ 9,000
Investment 3	$ (10,000)	$ 1,000	$ 1,000	$ 1,000	$ 10,000

Actual Equity Return Measures

	Yield Rate (IRR)[1]	Equity Dividend rate (Equity Cap Rate)			
Investment 1	10.0%	5.0%	($500/$10,000	=	5.0%)
Investment 2	10.0%	14.0%	($1,400/$10,000	=	14.0%)
Investment 3	10.0%	10.0%	($1,000/$10,000	=	10.0%)

[1] An internal rate of return (IRR) is the rate of return that discounts all expected future cash flows to a present value equal to the original investment. Cash flows include the annual equity dividend and equity proceeds from the sale at the end of a holding period (reversion).

Equity Yield Rate – Equity IRR Calculation: Investment

	Cash Flows	PV Factor @ 10%	PV of Cash Flows2
Year 1	$ 500	0.90909	$ 455
Year 2	$ 600	0.82645	$ 496
Year 3	$ 12,050	0.75131	$ 9,053
	[2]Total slightly off due to rounding		$ 10,004

As shown in the table, the equity yield rate for each of the three investments is 10%. In investment 1, if an investor invests $10,000 and then receives $500 at the end of year 1, $600 at the end of year 2 and $12,050 at the end of year 3 (the latter is from the third year's equity dividend and the equity reversion), the investor will have earned a 10% return on his/her initial investment. The equity reversion is the net proceeds from the sale of the investment at the end of the third year after the outstanding mortgage balance has been paid off.

As shown in investment 1, the equity capitalization (dividend) rate can be substantially lower than an equity yield rate if a property's annual equity dividend is expected to increase in the future, if the property value is expected to increase in the future and/or if the debt placed on the property is amortized. If the equity dividend or property value is expected to decrease (Investment 2) then the equity capitalization rate will be higher than the equity yield rate. If the equity dividend rate and property value remain unchanged and there is no loan amortization (Investment 3) then the equity capitalization rate and the equity yield rate will be the same. Much of this information can be obtained from lending

institutions. The balance may be gathered from discussions with investors, brokers, appraisers, and studies of sales.

The band of investments method involves multiplying the mortgage percent of property value times the mortgage constant. The mortgage constant is a percentage representing the total annual debt service (interest plus amortization of the loan). To this is added the equity percent of the property times the equity capitalization rate required by investors.

Assume that lending institutions are making loans of 75% mortgage and 25% equity with an interest rate of 11% on the mortgage for 25 years. Investors in this type of property require a 15% equity capitalization rate. The mortgage constant can be found in Column 6 of the 11% monthly Ellwood table. This is multiplied times 12 to convert it to a yearly factor (12 x .00981 = .117612 or 11.7612%).

The overall rate can then be calculated:

75% mortgage	x	11.7612%	=	8.8209 %
25% equity	x	15%	=	3.75
Overall rate				12.5709 %

There are more sophisticated methods of mortgage-equity capitalization which take into account additional factors. One of these is the formulation by Ellwood which includes the ratio of mortgage to value, the interest rate and term of the mortgage, the equity yield rate, the anticipated ownership or holding period, and anticipated appreciation or depreciation. Explanation of this method is too complex for WPAM. If the assessor is interested, there are books or courses available to further explore this method.

Residual Techniques

Residual techniques are based on numerous assumptions and their application is only justified if the assumptions can be reasonably made. Residual techniques can be used on the physical components of the property (land and building residuals) or on the financial components of the property (mortgage and equity residuals). While residual methods are not frequently used, the equity residual technique has been proposed as a way to value certain types of subsidized housing.[1]

Building residual technique. 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 plus the effective tax rate is deducted from the total net income. The remainder of the net income (residual) is divided by the building capitalization rate (which is composed of a percentage for the return on the investment plus a percentage for the recapture of the investment and the effective tax rate) to arrive at an indicated value for the building.

[1] Richard E. Polton, MAI, CRE, AICP with Julia LaVigne, *Valuation and Market Studies for Affordable Housing* (The Appraisal Institute, 2005).

Land residual technique. The land 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 plus the effective tax rate is deducted from the total net income. The remainder of the net income (residual) is then divided by the land capitalization rate (which is composed of a percentage for the return on the investment plus the effective tax rate) to arrive at an indicated value for the land.

Property residual technique. This method is used when neither the building value nor the land value is known. It requires that the value of the land at the end of the projection period be discounted to a present worth value. The present worth value, or reversion, is added to the capitalized value of the income stream.

Mortgage residual technique. This method is used when the amount of available equity is the known factor and the mortgage amount or value is the unknown factor. The amount of net operating income flowing to the equity investor is deducted from the total net operating income. The remainder of the net operating income (residual) is then divided by the mortgage constant (capitalization rate) to arrive at an indicated value for the mortgage. The available equity is added to the derived mortgage amount to indicate the total property value.

Equity residual technique. This method is used when the amount of the mortgage is the known factor and the amount of equity is the unknown factor. The annual debt service (mortgage payments) is deducted from the total net operating income. The remainder of the net operating income (the residual; also known as the before tax cash flow or the annual cash throw off) is then divided by an equity capitalization rate (also known as an equity dividend rate or cash on cash rate) to arrive at an indicated value for the equity. The mortgage amount is then added to the derived equity amount to indicate the total property value. The equity portion can also be determined using a discounted cash flow model as shown in Valuation and Market Studies for Affordable Housing by Richard E. Polton, MAI, CRE, AICP with Julia LaVigne The Appraisal Institute 2005. The example below shows the equity residual approach which estimates the equity two ways: (1) capitalizing the limited dividend and (2) by discounting the limited dividend and reversion value.

A limited dividend is generally the maximum amount an owner can take out of the property's net operating income if the project is operated under the HUD Section 236, 221 (d)(3) BMIR and Rural Housing 515 programs. The limited dividend is usually a set amount and is calculated to be a 6 or 8 percent annual return on the owner's original equity.

NOTE: All the figures noted in the table are only for illustration purposes.

Equity Residual Technique

Subject Property Net Operating Income	$	50,000
Less: Annual Debt Service	$	43,500
Available Cash (Limited Dividend)	$	6,500
Outstanding Mortgage Balance (OMB)	$	1,000,000

Capitalizing the Limited Dividend

Allowable Annual Limited Dividend	$	6,500
Equity Dividend Rate (Equity Capitalization Rate)	x	5.25%
Capitalized Equity Value	$	123,810
Value of Outstanding Mortgage and Equity (Property Value)	**$**	**1,123,810**

Discounted Cash Flow to Value Limited Dividend and Reversion

Allowable Annual Limited Dividend (30 Years)		$6,500
Annuity Factor, 8%, 30 years (column #5, annual compound interest table)	x	11.2578
Present Value of Limited Dividend	$	73,176
Reversion Value (Equity)	$	500,000
Lump Sum Factor, 8%, 30 years (Column #4, annual compound interest table)	x	0.0994
Present Value of Reversion	$	49,690
Present Value of Limited Dividend and Reversion	$	122,866
Value of Outstanding Mortgage and Equity (Property Value)	**$**	**1,122,866**

As shown in the equity residual technique example, the capitalized value of the equity ($123,810) is added to the outstanding mortgage balance of $1,000,000 to derive a value for the property of $1,123,810. As noted previously, an equity dividend rate (equity capitalization rate) is not a yield rate (rate of return). It is often lower than a yield rate if additional return is obtained in later years.

As shown in the discounted cash flow method example, the present value of the limited dividend ($73,176) and the present value of the equity reversion ($49,690) are added to the outstanding mortgage balance of $1,000,000 to derive a value for the property of $1,122,866. In the example, the holding period is 30 years and the required return (yield rate or discount rate) is 8 percent. The equity reversion is the amount the seller would obtain when he/she sells the property in 30 years (after paying off any outstanding mortgage balance). In the example, it is assumed that there is limited reversion value because of the property's age.

Discounted Cash Flow – Variability of Income Streams

Most income approach techniques imply a stable income stream that is similar to other properties in the market place. However, this is not always the case. A property may experience inconsistent vacancies (as compared to the market) or other factors which may result in the fluctuation of income streams.

In a discounted cash flow analysis, the appraiser estimates the property's net operating income over a projected holding period. The holding period is based on a typical time horizon an investor plans to hold the property. In practice, the typical holding period is 10 years. However, the holding period could also be the length of the mortgage. Once estimated, each of the estimated net operating incomes is then discounted to the present using the appropriate present worth of one factor (column #5, annual compound interest table). A reversion (net sale price) at the end of the holding period is also estimated and discounted to the present. The value of the property is the sum of the discounted net operating incomes and the discounted reversion value.

For assessment purposes, the treatment of real estate taxes in a Discounted Cash Flow (DCF) methodology is similar to loading the capitalization rate in the direct capitalization approach. The assessor does not include real estate taxes in the operating statement and "loads" the discount rate with the tax rate.

Example – Assume that the assessor is valuing a property with the following estimated 5-year variable income stream. The assessor estimates that property will sell for $75,000 at the end of this period.

The discount rate is 10 percent. The tax rate is 2.5%.

Variable Annuity Method
(5 year projected net income @ 10% discount rate + 2.5% tax rate = 12.5%)

Year	Income	P.W.A. of One Factor	Present Worth
1	$20,000	.888889	$17,778
2	$22,000	.790123	$17,383
3	$24,000	.702332	$16,856
4	$21,000	.624295	$13,110
5	$21,000	.554929	$11,654

Present value of income stream	$ 76,780
Reversion in 5 years equals	$ 75,000
($75,000 x .554929 [12.5% at 5 years])	$ 41,620
Present value of income stream and reversion	$118,400
Total property value	$118,400

A more detailed discussion of the discounted cash flow method can be found in the Appraisal Institute's *The Appraisal of Real Estate*.

Lease Considerations

A variety of leases exist to accommodate increasing and decreasing income streams. Declining market rental forecasts result from expected declines in competitive attractiveness of the subject property, a declining market, increasing neighborhood/locational competition, or increased operating expenses. Increased market rents are based on forecasts of expanding market conditions, increasing occupancy, gains in competitive attractiveness, or decreased operating expenses.

Lease Terms

Leases vary in term and type of rental agreements. Common types of leases include:

1. **Flat –**Lessee pays a fixed term lease.

2. **Step/Percentage increase –** Lessee pays periodic increase or decrease steps during the term of the lease. Increase or decrease may be a set dollar amount or percent.

3. **Percentage –** Lessee pays a portion, perhaps all of the rent based on percentages of sales during the term of the lease. A percentage increase may be based on a set amount or on a mutually accepted benchmark (such as the change in the consumer price index-CPI)

4. **Periodic market adjustment –** Lessee pays adjusted rent based upon periodic reappraisal of market conditions in accordance with the terms of lease.

5. **Option to purchase –** Lessee pays rent with option or options to purchase occupied property during the term of lease.

6. **Base/Overage rent –** Lessee pays a set base rent plus an overage rent. Overage rent is estimated based on the percentage, or graduated percentage, payable on sales that exceed a specified level or breakpoint.

7. **Sale-leaseback –** Where the owner sells the property and then leases the property back as a tenant from the new owner.

8. **Gross –** Lessor pays all operating expenses.

9. **Modified gross –** Lessee pays increases in certain operating expenses over the base year (also known as an expense stop).

10. **Net –** Lessee pays utilities.

11. **Double net –** Lessee pays utilities, property taxes and insurance.

12. **Triple net –** Lessee pays all operating expenses (utilities, property taxes, insurance and maintenance).

Note: the meaning of these terms may vary in different parts of the state. The appraiser should verify the actual terms of each lease.

Leased Area Analysis

How a tenant's leased space is defined can also vary from lease to lease. Some leased spaces include a portion of the common areas; others only include the specific area the tenant occupies. It is important to understand the different terms as they relate to define leased space.

1. **Gross area –** is measured from outside wall to outside wall. Balconies may sometimes be included in this figure.
2. **Usable area –** is generally the area occupied exclusively by individual tenants. Public areas such as bathrooms and lobbies are not included.
3. **Rentable area –** typically includes useable area plus bathrooms, lobbies, janitor's closets and public corridors but excludes stairs, elevators and airshafts.

Sales of income producing property should be evaluated as they occur. This procedure produces market data which can then be used to value other property. This process is particularly useful for market verification of net income cash flow.

Net income cash flow should be adjusted annually on income producing properties. When income-producing property is evaluated, consider the type of lease and current market conditions before applying the capitalization method. The capitalization method selected should be most reflective of market value on the date of assessment.

Reconciliation of the Three Approaches

Reconciliation is the process by which the appraiser evaluates and selects from the alternative approaches to value. Keep in mind that the three approaches to value are designed to be economically "independent." That is, the foundation for each reflects independent method and data. For the sales comparison approach, it's sales data. For the cost approach, it's cost of construction material, cost of labor, soft costs, and depreciation data. For the income approach, it's rental and financial data.

The appraiser should *consider* all three approaches when estimating the value of a property. However, all three approaches may not be developed in an appraisal because a sufficient amount of data may not be available or, due to the specific property characteristics, the approach may be considered less reliable in estimating market value. If more than one approach is developed in the appraisal, the individual value estimates must be reconciled into one final value estimate for the property.

Given the data used and the type of property appraised, the appraiser must consider how well each method employed estimates the market value of the property. For instance, if the probable buyer of a given property relies primarily on the income approach for their investment decisions, then the income approach should be given the primary emphasis when estimating the value of the subject property. On the other hand, if the probable buyer's investment decision is based on more factors than just the income potential of the property (i.e., size and quality of the labor force, amount of promised city funding, cost and availability of utilities, tax credits), the income approach may be less reliable in estimating market value.

How does the appraiser determine which approach or approaches are most reliable? The best guidance that can be offered is to review market activity for the subject and determine the attributes by which the *market* uses to evaluate alternative real estate decisions. Generally, the greatest weight should be placed on the approach for which the greatest amount of reliable and appropriate data is available that will yield the highest degree of confidence.

The final value estimate may be the value estimate derived from one of the approaches or may be a careful reconciliation of the applicable approaches.

Valuation of Specific Commercial Properties

The following section is intended to give the assessor some general information on the valuation of specific commercial properties. It is impossible to cover all of the elements that affect each type of commercial property. Thus, this section is intended as a place of beginning for the assessor in valuing commercial property. There are other books and texts that discuss the valuation of these types of properties in more detail.

Figure 9-7, Commercial Income and Expense Questionnaire and Figure 9-8, Lease Questionnaire, are examples of forms which could be used to collect income and expense information. Although these forms are not DOR prescribed under sec. 70.09(3), Wis. Stats., they may be modified and used to obtain local information. As stated in sec. 70.47 (7) (af), Wis. Stats., income and expense information obtained for an assessment objection shall remain confidential, with limited exceptions.

Retail Stores

Retail stores include stores such as bookstores, men's and women's apparel shops, and other specialty stores. Restaurants, taverns, laundromats, and service enterprises are also included. This category ranges from the small downtown store with offices or apartments above to the large department store. The sales comparison approach is often used to value smaller retail stores. Because smaller retail stores may be easily adapted to other retail uses, sales of these stores can be used as comparable sales in applying the sales comparison approach. For the larger stores and those smaller stores for which there are no comparable sales, the assessor should use the income and/or cost approaches.

The location for a retail store is of extreme importance. National firms do extensive market studies to determine the exact location of their retail outlets. Even the side of the street on which the property is located can have an effect on value. A property location next to a large department store will be worth more than a location across the street that does not have a great drawing power next door. Retail property should be easily reached by the customer. Property located on a street with poor access will not be as desirable as one located on a well-traveled street. Also, the store should be located where customers live. For example, a "convenience" food store will do best when located in a residential neighborhood.

The second most important consideration would probably be parking. The availability and cost of parking has a big influence on the actions of the retail shopper. The high cost and inadequate amount of downtown parking combined with congested traffic has been a major reason for increased growth of suburban shopping centers with acres of free parking.

Shopping Centers

A shopping center is a complementary group of stores united through one architectural style with sufficient off-street parking for the shoppers' needs. The stores located in the center are selected by a plan to provide for the shoppers' daily needs. There are four distinct advantages to the shopping center:

1. The large number and wide variety of stores attract customers.
2. All of the shopping needs can be handled at one location.
3. Parking is much easier than downtown.
4. Malls provide shelter while shopping.

In addition, the shopping centers are closer for those who live in the suburbs.

Shopping centers can range in size from a small neighborhood center to a large regional shopping center. A neighborhood shopping center is typically comprised of a supermarket and a few specialty stores, whereas a regional shopping center generally contains one or more major department stores and a wide variety of specialty stores that provide the shopper with a range of choices equivalent to, or greater than a downtown shopping district.

In valuing the shopping center there are a number of questions that the assessor should ask: Is demand sufficient to support the shopping center? How is the center affected by present competition? What affect will the shopping center have on nearby shopping areas and the downtown district? When answering these questions the assessor will have a picture of the effect of the shopping center on supply and demand in the area.

Office Buildings

When valuing office buildings, the assessor should be aware of the trends of business development and industrial activities in the municipality. This can provide an indication of how much office space is needed. The assessor then makes a study of how much space is available, what the rental rates are, the percentage of vacancies, and the type and quality of tenants in the various types of office buildings. Often, office buildings can be classified as

Class A, B or C for investment purposes. Investment classification will depend on property amenities, location, type of tenant, lease rates, property size, etc. The type of classification should not be confused with quality of construction classification.

The assessor should analyze the subject office building with a number of criteria in mind: How much of the gross floor area is actually rentable and how much is used for lobbies, corridors, stairways, elevators, and other non-rentable uses? Is the mechanical equipment in good shape? Is there adequate heating and air conditioning? How does this building compare with other offices in the area? There should also be adequate parking, public transportation, restaurants, and stores for tenants.

After analyzing all of the information, the assessor should be able to arrive at a fair market rent, a correct expense estimate, and an appropriate capitalization rate in order to estimate the property's fair market value.

The cost approach can be used in estimating market value. However, it should be noted that in an office building, especially a corporate headquarters, items may be built into the building that are of a higher quality than the average buyer would demand and this should be considered in the analysis of functional obsolescence.

Apartments

When valuing apartment buildings, the assessor must analyze the neighborhood, considering the following factors:

1. Is adequate public transportation available?
2. What is the quality and availability of public utilities and police and fire protection?
3. Are there sufficient civic, social, and commercial facilities (schools, theaters, and shopping) in the area?
4. Will zoning permit the use as an apartment?
5. How attractive is the neighborhood in the eyes of the public?
6. What is the income level of residents in the area?
7. Who is the typical tenant for the project?

In addition the assessor should make a study of each individual property with regard to:

1. **Layout-**Is the floor plan adequate? Are there enough closets? Are common facilities such as laundromats easily accessible?
2. **Mechanical-**Are heating, plumbing, and air conditioning well maintained? Do these services provide adequate comfort to the tenants?
3. **Management-**Are repairs made in a timely manner? Is an attractive appearance maintained? Is snow shoveled and grass mowed, are hallways clean, and is garbage picked up frequently?

4. **Amenities-**Are tenants provided with safety and quiet enjoyment of the premises? What recreational facilities are provided with the property? How close is it to public transportation? Is the property in harmony with the rest of the neighborhood?

Often smaller apartments are valued through use of a Gross Rent Multiplier (GRM). Using this method, the assessor compares the subject with other properties that have sold to arrive at a market rent and an appropriate GRM for the property. The income approach may also be applied by arriving at a net income and capitalizing it into an estimate of market value.

The direct sales comparison approach may also be used in the valuation of apartment buildings. Using this method, market values are derived from a study of similar properties recently sold. The assessor estimates the market value of each type of apartment sold (i.e., efficiency, one bedroom, two bedroom, etc.), adjusts those values to arrive at a total value for the subject apartments, and then adds or subtracts for any overall adjustments, such as the lack or presence of a swimming pool. Because each property differs based on location; the number of efficiencies, one and two-bedroom apartments; the size of the rooms; the layout and condition of the building; and many other factors, numerous adjustments are often necessary, requiring careful examination and interpretation of the market data.

The cost approach can also be used to provide an estimate of market value. The main problem in using this approach, as is usually the case, is arriving at the estimate of depreciation. In newer apartments there should be little physical, functional, or economic depreciation and thus the cost approach may aid the assessor in arriving at a market value estimate. With older apartments; however, it is difficult to estimate functional obsolescence and there is the additional problem of trying to estimate the value added to a property as a result of remodeling.

Bed and Breakfast Establishments

Generally, a bed and breakfast establishment offers overnight accommodations and breakfast in the morning in a structure that also serves as the proprietor's personal residence.

There is no question that the structure itself is taxable. There is no exemption for land and buildings used for this purpose. Household furniture, equipment, and furnishings are exempt under sec. 70.111(1) Wis. Stats., only if such items are kept for personal use by the owner. Assessors should refer to *Mary Faydash,* v *City of Sheboygan,* Wisconsin Court of Appeals, District II, Appeal No. 2010AP2073, March 2, 2011 for guidance.

As a result, any furniture, equipment, and furnishings used in, or intended to be used in, furnishing overnight accommodations and breakfast to the public for a fee is considered taxable. Furniture, equipment, and furnishings used in this manner are not "kept for personal use by the owner."

All furniture, equipment, and furnishings located in other areas of the residence are presumed to be kept for personal use by the owner and are exempt. This is true even if bed and breakfast fee-paying guests are shown other areas of the residence or if they occasionally visit those areas. Only furniture, equipment, and furnishings located in areas used to provide the goods and services for which a fee is charged is considered taxable.

Establishments that represent to the public that bed and breakfast accommodations are available for a fee for any part of a year are considered to be using the involved personal property for something other than personal use and as a result that property is taxable. Advertising through the media, word-of-mouth, or any other similar activity intended to make the public aware of the available service (such as a yard sign) are considered representation of intent.

This policy is not intended to apply to the occasional renting of a bedroom during a special or unusual event that has created a shortage of available public accommodation in the immediate area.

A list of licensed bed and breakfast establishments in your municipality can be obtained by contacting the Food Safety & Recreational Licensing Section in the Division of Public Health, Department of Health & Family Services, at 608-266-2835.

Hotels and Motels

These properties are mainly engaged in the sale of rooms, food, and beverage. Hotels and motels are unique in that rooms are usually rented by the day or week. There is very little long-term rental. If a room is not sold for a day, that income is lost forever, whereas in a retail store, inventory can be sold tomorrow. The hotels and motels either close down or operate at a reduced capacity during the off-season. This is especially true of resort type properties where the trade is seasonal. Hotels can vary in amenities and services. Full service hotels may have fitness centers, restaurants, taverns and meeting rooms while limited service hotels may have no additional amenities.

These properties are extremely sensitive to changes in the economy. For example, if the state of the economy would decline and people could not afford vacation trips the value of resort hotels and motels could be seriously affected. Also, an increase in winter sports activities can turn areas that are dormant into year-round enterprises with a higher value.

The use of the income approach for the valuation of hotels and motels is similar to its use for other types of properties in that the expenses are subtracted from the income to arrive at a net income figure which is capitalized into a market value estimate. Hotels may have additional expenses such as franchise fees that other types of properties do not have. The assessor may run into a problem in that the amount of income is substantially affected by the quality of management. Excellent management will often produce a higher return than average; while poor management produces a lower return. The assessor should be careful to make sure that only the real estate is being valued and not the quality of management or goodwill. The comparable sales approach is difficult to apply to the valuation of this type of property because individual properties may differ greatly in services, reputation, age, and location all of which can affect value. The cost approach can be used to estimate value but

the assessor must be aware of the obsolete materials and styles used in construction of older hotels. Also, when dealing with chain motels often the same plans are used and thus the actual construction costs do not reflect an appropriate amount for architect's fees and possibly overhead and profit.

Federally Subsidized Housing

What is Federally Subsidized Housing?

Federally Subsidized Housing is sponsored by the Federal government to provide assistance to low and moderate income families or the elderly. The federal sponsors include the Department of Housing and Urban Development (HUD), the Rural Housing Service (RHS), and the Internal Revenue Service (IRS). The Wisconsin Housing and Economic Development Authority (WHEDA) administers the IRS programs in Wisconsin.

The HUD programs are primarily for urban areas, whereas the RHS programs are primarily for rural areas. The need for housing determines the location of WHEDA programs (called Section 42 IRS Income Tax Credits).

What Are the Classifications of Federally Subsidized Housing Programs?

The different types of programs are commonly classified by the federal legislative numbers as follows:

Section 8	Rental Subsidy
Section 42	Income Tax Credits
Section 220	Mortgage Insurance
Section 221 (d)(3)	Market Interest Rate
Section 221 (d)(3)	Below Market Interest Rate (BMIR)
Section 221 (d)(4)	Mortgage Insurance
Section 223 (f)	Mortgage Insurance
Section 231	Mortgage Insurance
Section 236	Mortgage Interest Reduction
Section 515	Rural Housing Service Rental Assistance

What Are the Types of Federally Subsidized Housing Assistance?

Each program provides at least one of the four primary types of assistance:

1. **Mortgage insurance**
   HUD insures mortgages made by private lending institutions to help finance construction or to help finance rehabilitation projects for low-income families and the elderly

2. **Mortgage Interest Reduction**
   HUD allows a developer to obtain a mortgage with an interest rate as low as 1% to encourage increased rental housing for low-income families and the elderly. Most mortgage interest reduction programs also have a limited dividend which restricts the amount the property owner can receive as a return on his/her original investment. The Wisconsin Court of Appeals District IV decision of Appeal No. 03-1857, *Mineral Point Valley Limited Partnership v. City of Mineral Point Board of Review*, dated July 15, 2004, concluded in paragraph 13 that "Based on the result in **City of Bloomer**, we conclude that a capitalization rate based on a subsidized interest rate is impermissible, and that a market rate must be used, together with "all the other factors influencing value, to produce the fair value of the partnership's real estate."

3. **Income tax credits**
   Income tax credits reduce the federal tax liability for public or private investors in exchange for their participation in the equity of low-income rental housing. *The 1999 Wisconsin Budget Bill amended sec. 70.32(1g), Wis. Stats., to read "Beginning with the property tax assessments as of January 1, 2000, the assessor may not consider the effect on the value of the property of any federal income tax credit that is extended to the property owner under section 42 of the Internal Revenue Code."*

4. **Rental subsidies**
   HUD subsidizes the rent for low-income families and the elderly by making up the difference between what a low-income household can afford and the fair market rent for an adequate housing unit.

   Because many programs have a mix of different types of assistance, this list is not mutually exclusive.

Changes in Federally Subsidized Housing Programs

The number of subsidy programs available and the rules which govern them are constantly changing. Some subsidized housing programs have been discontinued and replaced with new programs. The rules and regulations of these programs can also change over time.

It is important for the assessor to be aware of the current regulations and past program changes when estimating the value of a subsidized housing project. The assessor must also understand the likelihood of future program changes and their impact on property value. Certain types of program changes may add additional risk to the project or may change rental income in the future. Also, sales of federally subsidized housing projects prior to certain program changes may not be reflective of current conditions. On occasion, sales of these projects are initiated by the program changes and may not be valid market value sales. Examples of two subsidized housing program changes are outlined below.

Low Income Housing Preservation and Resident Home Ownership Act (LIHPRHA)

The Low Income Housing Preservation and Resident Home Ownership Act (LIHPRHA) was enacted in the early 1990's to prevent the prepayment of federally subsidized mortgages and the subsequent displacement of low-income tenants.

Many property owners built low-income housing in the 1970's using low-interest mortgages through either Section 236 or Section 221(d)(3) of the National Housing Act. These mortgages allowed the property owner to prepay the mortgage after 20 years and convert the project into market rate housing. LIHPRHA was enacted to try to prevent the prepayment of these mortgages. One of the consequences of LIHPRHA was the resulting sale of many low-income properties. Because of the many regulations relating to the Act, these sales should not be considered market value transactions.

Mark to Market

The Mark to Market initiative (also known as the Section 8 Renewal and Restructuring program) attempts to address chronic structural problems in the Section 8 projected-based assistance program. One of the likely outcomes of this rule is the reduction of the Section 8 rental rates previously received by certain low-

income housing projects that have project-based contracts Housing Assistance Payment contracts (HAP contracts). The reduction of Section 8 rents may cause the project to be no longer economically viable. If this is the case, the projects may be eligible for mortgage restructuring.

What are the common Wisconsin federally subsidized housing programs?

Section 42 Tax Credits[2]

Section 42 income tax credits (regulated by the IRS) is a dollar-for-dollar reduction in federal tax liability for investors in exchange for equity participation in low-income rental housing. The tax credits can be used for new construction, acquisition, or possibly the rehabilitation of low-income rental housing. The number of qualified low-income units that meet federal rent and income targeting requirements determine the amount of credit allocated. In Wisconsin, WHEDA administers Section 42 tax credits. These credits come with many restrictions. For example, many units must be set aside for low-income tenants. In addition, the tax credits are claimed on the federal tax return only during the first 10 years of the project. Also, the tax credits are either 9% or 4% per year of the “qualified basis” depending on the type of project and financing arrangements. The qualified basis is the eligible basis times the portion of available low-income units.

[2] The book Valuation and Market Studies for Affordable Housing, by Richard E. Polton, MAI, CRE, AICP with Julia Lavigne, 2005, the Appraisal Institute provides a good background on the Section 42 program and other affordable housing programs. The text provides a useful framework to consider the valuation of these types of properties

While the tax credits are claimed over a 10 year period, the Internal Revenue Service (IRS) requires a minimum compliance period of 15 years. In addition, the state housing authority may require the owner to enter into a Land Use Restriction Agreement (LURA) that requires the owner to maintain the project for 30 years with a minimum percentage of rent-restricted units for income-qualified tenants. Wisconsin's housing authority, WHEDA, now requires all Section 42 project owners to enter into a 30 year LURA. However a LURA was not always required in the past, so there may be some projects that do not have one.

A limited partnership is the typical ownership arrangement for Section 42 tax credit projects. The general partner is often the developer of the project and the limited partners most often invest in the property for the tax credits. The return on investment for the limited partners primarily comes from the tax credits and other tax-related benefits (losses). They usually do not obtain much of their return from the annual cash flow of the property or from any reversion value (value upon subsequent sale). The general partner often is compensated from development fees (from building the project). The general partner may also receive income from managing the property.

Section 42 projects usually cost more to build than physically similar market rate properties. However their net operating income is usually lower than physically similar market rate properties. Therefore the property cannot support as much debt. The construction of these projects is made feasible by the amount of equity generated by the sale of the tax credits. So based on the cost to construct (not value), Section 42 projects usually have a larger percentage of equity to debt than market-rate properties.

There are various risk factors related to Section 42 projects. In some markets, the pool of qualified tenants is shallow due to household income restrictions. Tenants must have low enough income to qualify to rent a unit while at the same time have high enough incomes to be able to pay the rent.

For more information concerning Section 42 tax credits, contact WHEDA (Wisconsin Housing and Economic Development Authority). The agency's contact information is at the end of this chapter.

A recent law change precludes assessors from considering the effect IRS Section 42 low income housing tax credits may have on the total value of a Section 42 property. "Beginning with the property tax assessments as of January 1, 2000, the assessor may not consider the effect on the value of the property of any federal income tax credit that is extended to the property owner under section 42 of the Internal Revenue Code." (sec. 70.32(1g), Wis. Stats., as amended by 1999 Act 9).

Section 221(d)(3) Market Interest Rate

Section 221(d)(3) provides for mortgage insurance for private 40-year mortgage loans to finance new or rehabilitated rental apartment complexes containing five or more units. A profit-motivated owner could not, without HUD consent, fully prepay a mortgage loan insured under this program for the first 20 years of the loan.

Section 221 (d)(3) Below Market Interest Rate (BMIR)

This early HUD program insured and subsidized 40-year mortgages with below market interest rates as low as 3%. Eligible tenants have incomes below 95% of the median for the area. At their inception, projects were required to remain affordable to eligible tenants for at least 20 years. The program also limited the available dividend to 6% of the original equity. The Section 236 program replaced the BMIR program.

Section 221(d)(4). This program provided federal insurance of privately financed market rate mortgages for new or rehabilitated rental projects with five or more housing units. This program does not have income limits for tenants. Mortgages up to 90% of the FHA-approved replacement cost may be insured under this program.

Under most circumstances, a potential buyer of a Section 221 (d) (3) Below Market Interest Rate project must continue to keep the project affordable. They must assume the existing mortgage and the limitations on the amount of equity return allowed (limited dividend). This limitation on the annual equity dividend limits the amount the potential buyer would pay for the property (and therefore its value). In determining the purchase price, the potential buyer would likely consider the amount of the annual equity return and the amount of the outstanding mortgage balance.

Section 236

Section 236 is a HUD interest reduction program. The 1% subsidized interest rate used to develop and build the project came with the condition that the developer would reduce the rents and pass the savings to the tenants. A tenant's income must be 80% or less of the area median income to be eligible. The mortgage interest rate varies between 1% and 7.5% with a limited dividend of 6% of the original equity investment. In 1974, Section 236 ended and Section 8 became the chief program.

Under most circumstances, a potential buyer of a Section 236 project must continue to keep the project affordable. They must assume the existing mortgage and the limitations on the amount of equity return allowed (limited dividend). This limitation on the annual equity dividend limits the amount the potential buyer would pay for the property (and therefore its value). In determining the purchase price, the potential buyer would likely consider the amount of the annual equity return and the amount of the outstanding mortgage balance.

Section 8

The Section 8 program provides rent subsidies to project owners for qualified low-income tenants. To be eligible for subsidies, low or very low-income families at the time of their initial occupancy must rent the project units. Families whose incomes do not exceed 80% of the median income in the area are defined as low-income; very low-income families do not exceed 50% of the median income. Tenants must pay a set percentage of their income as rent. The percentage varies by family size and income level. From 1974 through 1979 during the initial Section 8 program, projects had unrestricted cash flow; after 1979, projects had imposed dividend restrictions. Project owners receive a rental subsidy payment under a Housing Assistance Payment Contract (HAP Contract) that range from 15 to 40 years.

There are project-based Section 8 subsidies and tenant-based Section 8 subsidies. Project-based subsidies are "attached" to the building and should therefore be considered when estimating the value of the housing project. Tenant based subsides (Section 8 vouchers and certificates) are "attached" to the tenant and can therefore be taken from one housing project to another. It is not appropriate to consider tenant-based subsidies when estimating the value of the housing project.

Section 515

Section 515 of the 1949 Housing Act authorizes FmHA (now known as RHS) to provide for direct mortgage loans for rural rental housing. Amounts up to 95% of housing development costs enclose these loans. After construction of the project, RHS may provide a limited distribution owner with mortgage interest subsidies. Tenants may pay lower rents. The dividends are limited to a maximum annual return of 8% per annum on a cumulative basis on the 5% equity contribution.

Under most circumstances, a potential buyer of a Section 515 project must continue to keep the project affordable. They must assume the existing mortgage and the limitations on the amount of equity return allowed (limited dividend). This limitation on the annual equity dividend limits the amount the potential buyer would pay for the property (and therefore its value). In determining the purchase price, the potential buyer would likely consider the amount of the annual equity return and the amount of the outstanding mortgage balance.

What Are the Steps When Assessing Federally Subsidized Properties?

Subsidized housing properties operate differently than conventional (market-rate) properties. They have specific operational constraints (regulations) and risk factors that are different from a market rate property. They should be considered as a separate market and distinct from conventional (market level) projects.

The following are guidelines for valuing these types of properties:

1. Determine the program that regulates the property.

2. Learn the terms and conditions of the particular program by asking the property owner for the following documents:
   a. The regulatory agreement

   b. The original mortgage document

   c. The federal "profit and loss" form

   NOTE: A list of sources for the different types of programs is included at the end of this section.

3. Identify the primary ownership interests that may exist:
   a. Limited-partnership
      An investment partnership in which at least one partner (the general partner or partners) is liable beyond the amount invested and at least one partner's liability is limited.

   b. Nonprofit
      An organization that neither pays any dividends to its members nor are any pecuniary profits intended to be paid to its members.

   c. Public agency
      A service-orientated organization authorized by legislative decree to act for others.

4. Determine the assessable interest by examining the following:
   a. Ownership types
      If a limited-partnership owns property, the property is likely to be assessable. The purpose of limited-partnership ownership is to insulate a tax-credit investor from limited personal liability on a loan when low-income housing tax rates are part of the financing structure. In addition, the limited-partnership objective is to maximize losses and tax credits and not to obtain cash flow or long term appreciation.

      If a nonprofit organization or a public agency owns property, the property is likely to be exempt. Review sec. 70.11(4), Wis. Stats., to understand when the exemption applies.

   b. Wisconsin Statutes
      Chapter 70 provides guidance for figuring out the assessable interest of property. Section 70.32(1), Wis. Stats., says that real property shall be assessed "from actual view or from the best information that the assessor can practicably obtain, at the full value which could ordinarily be obtained therefore at private sale."

The 1999 Wisconsin Budget Bill amended sec. 70.32(1g), Wis. Stats., to read "Beginning with the property tax assessments as of January 1, 2000, the assessor may not consider the effect on the value of the property of any federal income tax credit that is extended to the property owner under section 42 of the Internal Revenue Code."

c. Case law

The Metropolitan Holding Court Case decided how assessors are to deal with government restrictions on property. The Wisconsin Supreme Court directed the assessor to "assess Layton Garden [subject property] using the capitalization of income approach based on actual income and expenses." The Court said, "In using estimated market rents and expenses, the city assessor essentially pretended that Layton Garden was not hindered by the HUD restrictions. . . . Layton Garden was, however, hindered by the HUD restrictions and it is undisputed that the HUD restrictions precluded Metropolitan from charging market rents."

The Wisconsin Court of Appeals District IV decision of Appeal No. 03-1857, *Mineral Point Valley Limited Partnership v. City of Mineral Point Board of Review*, dated July 15, 2004, concluded in paragraph 13 that "Based on the result in **City of Bloomer**, we conclude that a capitalization rate based on a subsidized interest rate is impermissible, and that a market rate must be used, together with "all the other factors influencing value, to produce the fair value of the partnership's real estate.

5. Determine the Highest and Best Use of Fee Simple Property.

As previously defined in the WPAM, fee simple means the owner possesses all the rights an individual can have in property. Fee simple is the fullest form of private ownership. Section 70.32, Wis. Stats., says that an assessor should value real property "at the full value which could ordinarily be obtained therefore at private sale." However in the Metropolitan case, the Supreme Court said the federal government (HUD) has restricted the rights of the subsidized property. Therefore, not all the rights are assessable and it is possible that these restrictions may prohibit alternate uses for the subsidized property.

Determining the Highest and Best Use of property requires consideration and analysis of EACH of the following steps:

a. Physical factors

The assessor must evaluate the possible physical uses for the property site by considering location, size, frontage, width, depth, shape, topography, soil conditions, and existing site improvements to name a few.

b. Economic factors

The assessor must evaluate the possible feasible uses that may affect a net return to the property site owner. In addition, the assessor must consider the prices of comparable sites in the area, the level of assessment, taxes, special assessments, and the cost of services in the area.

c. Social factors

The assessor must evaluate population trends, family sizes, education trends, crime rates and age distributions.

d. Legal/Governmental factors

The assessor must evaluate the effect current zoning and local ordinances have on the property site including municipal services, tax and assessment policies, liens, interests held, **title data such as deed restrictions, etc.** The assessor should be aware of the legality of certain deed restrictions.

6. Determine the Proper Method for Valuation of Federally Subsidized Housing.

The assessor should consider all three approaches to value when assessing federally subsidized properties. Review the guidelines found in sec. 70.32 Wis. Stats., regarding the use of sales and other factors in determining market value.

A. Sales comparison approach

Review the guidelines found in sec. 70.32, Wis. Stats., regarding the use of sales in determining market value and consider the following:

- Recent arm's-length sales of the property to be assessed
- Recent arm's-length sales of reasonably comparable property
- All factors affecting the value of the property

Section 70.32 (1), Wis. Stats., states: "*Real property shall be valued by the assessor in the manner specified in the Wisconsin property assessment manual provided under s. 73.03 (2a) from actual view or from the best information that the assessor can practicably obtain, at the full value which could ordinarily be obtained therefore at private sale. In determining the value, the assessor shall consider recent arm's-length sales of the property to be assessed if according to professionally acceptable appraisal practices those sales conform to recent arm's-length sales of reasonably comparable property; recent arm's-length sales of reasonable comparable property; and all factors that, according to professionally acceptable appraisal practices, affect the value of the property to be assessed.*"

To be considered comparable, the recent arm's-length sales should have restrictions similar to the subject property. The assessor may have to perform a statewide search to find comparable sales. Sales data should always be confirmed by reliable sources. Information may be obtained by viewing website data and by calling other assessors who have similar subsidized housing in their jurisdictions.

B. Cost approach

The effect of federally subsidized housing restrictions would most likely be considered as economic obsolescence when using the cost approach. Also, be aware that construction costs for subsidized housing tend to be higher because of overhead costs. For example, extra construction fees and legal expenses are just some of the overhead costs to be expected when valuing subsidized housing. Due to the difficulty in estimating external obsolescence, the Cost Approach is the least reliable valuation method.

C. Income approach

The income approach may be the most useful method for valuing subsidized housing due to the conditions of the agreement and the limited availability of data. Several methods of valuation can be used including equity residual technique, mortgage-equity capitalization and discounted cash flow. Any income approach used must consider all the impacts of the subsidy program. This includes changes in rent levels and restrictions on equity return from a limited dividend.

Capitalization rates from the marketplace are usually derived from the sale of market-rate projects. Therefore they do not reflect the unique characteristics of subsidized housing. In some cases there can be more risk in subsidized housing, in other cases there is less. Rent levels are often regulated and annual increases may be difficult to obtain. In many cases the proportion of debt to equity is different in subsidized projects than in market rate projects. With some types of projects the amount of annual equity return is limited (called a limited dividend). While in other types of projects the equity investors primarily look to other sources beyond the cash flow of the property for their required return on investment.

If an equity residual technique is used in assessing, the amount of the outstanding mortgage balance and the amount and duration of the annual limited equity dividend must be found. To determine the value of the equity, the assessor can discount (present value) the annual limited equity dividend and any reversion value (value upon subsequent sale) by an appropriate discount rate. The discount rate used should reflect the risk inherent in the investment. The present value of the equity is then added to the outstanding mortgage balance to obtain a value. This method assumes that the property cannot support any more additional debt and the current mortgage cannot be re-amortized. If the property could support more debt (through a second mortgage or re-amortizing the existing debt) this method could undervalue the property.

If the mortgage-equity method is used in assessing a Section 42 housing project, the assessor should determine if the current mortgage can be assumed. If the current mortgage can be or must be assumed, then the existing mortgage terms should be incorporated into the capitalization rate (reflected in the mortgage constant). If a new mortgage would be obtained at purchase, then the prevailing mortgage rates

and terms would be used. As stated previously, equity investors usually do not expect much of their return to come from the property's cash flow (their return comes from the tax credits). Therefore the equity capitalization rate could be quite low.

If the mortgage-equity method (band of investment) is used in assessing a Rural Housing Section 515 project with a subsidized mortgage interest rate, construct the capitalization rate from the current mortgage terms and conditions (reflected in the mortgage constant) and the required equity capitalization rate. This band of investment capitalization rate should be applied to the stabilized net operating income of the property. The assessor must also consider any equity return limitations. The assessor should be aware that the recent Court of Appeals decision does not allow the 1% interest rate attached to a Section 515 project to be used as the mortgage interest rate in the capitalization rate. This court case indicates, however, that all other factors influencing value must be considered.

If the discounted cash flow method is used, consider the following:

- The present value of the net operating income
- The present worth of the reversion

NOTE: The following should be included despite the method used: project rents and expenses, mortgage terms and conditions, expected yield rates, and any equity return limitations.

Sources for Additional Information:

Wisconsin Housing and Economic Development Authority **(WHEDA)**
201 W Washington Ave., Suite 700
P.O. Box 1728
Madison, WI 53701-1728
1-800-334-6873
(Madison) 608-266-7884
http://www.wheda.com/ For Section 42 tax credit information follow the link: Multifamily professionals on the WHEDA home page

United States Department of Housing and Urban Development **(HUD)**
Henry S. Reuss Federal Plaza
310 West Wisconsin Avenue
Suite 1380
Milwaukee, WI 53203
414-297-3214

Rural Housing Service **(RHS)**
USDA Rural Housing Development State Office
4949 Kirschling Court
Stevens Point, WI 54481
715-345-7600

Golf Courses

Valuation of golf courses offers the same challenge as other commercial properties: gathering enough information to appropriately determine the market value of the property. The following characteristics have bearing on the value of the golf course and should be ascertained by the assessor as part of the assessment process. Types of courses include regulation, executive and par-three. Courses are laid out within a core area of land, along a straight corridor, in a loop or figure-eight pattern anchored by the clubhouse. Courses are municipal, daily fee or private operations run with profit or non-profit motivations. Golf courses can include clubhouses, pro shops, driving ranges, restaurants, swimming pools, and other fitness facilities. The course may be a stand-alone operation, associated with a resort, or focal point for residential or condominium development.

All three approaches to value can be available in the valuation of a golf course. The land is valued as if vacant and available for its highest and best use. Possible uses include agricultural, residential or continuing use as a golf course. The feasibility of converting to another use must be examined in light of zoning restrictions, physical and financial limitations, and covenants enacted as part of a development project.

Cost Approach

Some national cost manuals include schedules for golf course construction. Costs are usually allocated on a per hole basis and include the preparation of greens, tees, fairways, cart paths, irrigation and drainage systems. Application of the costs requires the assessor to determine the amount and quality of construction that took place on the course. Did the natural terrain minimize the need for extensive grading? Are playing areas constructed to national association standards or are the tees, for example, merely more closely mowed areas of the course? Is there a sufficient water supply available to maintain the course?

Additional land improvements could include paved parking areas, lighting, bridges over creeks or ditches, and fencing. Improvements can include a clubhouse, maintenance and storage buildings, and on-course shelters. Equipment used in the operation and maintenance of the golf course is included as part of the personalty. Furniture and fixtures used in the operation of the clubhouse, pro shop, restaurants and bars are also included in the personalty. Appropriate depreciation is applied to derive a final cost approach value estimate.

Sales Comparison Approach

Use of the sales comparison approach can be limited in golf course valuation by the small number of sales occurring in the market. Additionally, most courses are unique in their combination of course layout, buildings and other facilities making comparison between courses very difficult. A value estimate derived merely on a price per hole comparison, for example, is unlikely to be appropriate.

Adaptations of a gross income multiplier based on total revenue and golf revenue have been suggested as more appropriate methods of comparison.[1] The relationship of sale price to income produced is used as a means of comparison between courses. Accurate data regarding the amount and sources of the revenue is essential in use of these multipliers. The golf revenue multiplier should be derived only from golf related activities like greens fees, cart rentals, driving range fees and memberships. The price per round divided by the average greens fee, a greens fee multiplier, has also been mentioned as a potential unit of comparison between golf courses.[2] Again, accurate data must be gathered for weekday versus weekend rates, senior and junior rates, member versus non-member rates. The unavailability of income information would be detrimental to applying any one of these multipliers as a method of comparison for golf courses.

Income Approach

The income producing capability of a golf course is usually a strong determinant of its market value. Therefore, the use of the income approach is appropriate. An existing golf course can be valued by direct capitalization of its annual income if that income stream is stable. New courses or courses with unstable income streams may be valued by discounted cash flow analysis.

Obtaining income information for the subject course and comparable golf courses is the challenge to the assessor. Club officials, course managers, and operating statements are sources to pursue. National golf associations and industry publications may offer national statistics on normal operating expenses and income. Revenues to use in an income approach analysis include greens fees, course memberships (ones that do not involve ownership interest), cart rentals, locker and equipment rentals, pro shop sales, driving range fees, and food and beverage sales. Course memberships that include ownership interest and any one-time initiation fees should not be capitalized. Application of the income approach to a golf course should follow the same methods used for other commercial properties.

Historic Properties

The various historic preservation programs and the valuation of residential historic properties are discussed in detail in WPAM Chapter 8. Below is a discussion of how a historic designation may affect the valuation of historic commercial properties using the income approach.

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[1] Gimmy, Arthur E., MAI and Benson, Martin E., MAI, *Golf Courses and Country Clubs, A Guide to Appraisal, Market Analysis, Development, and Financing*, Chapter 9, Appraisal Institute, 1992.

[2] Lawrence A. Hirsh, MAI "Golf Courses-Valuation and Evaluation," *The Appraisal Journal*, January 1991, pages 38-47.

Income Approach

The income approach, as described previously in this chapter, can be used to value commercial historic property. There are, however, a number of items unique to historic properties which affect the income stream, the expenses, the gross rent multiplier (GRM), and the capitalization rate.

The assessor should try to use similar historic properties subject to the same restrictions when estimating market rent. For example, there may be restrictions that limit the possible uses or the ability to alter the property to meet current market demands such as adding new bathrooms or remodeling to allow more efficient uses. This may reduce the desirability, and, thus, the market rent of the property.

Restrictions on historic properties may result in higher expenses than for non-historic properties. Maintenance costs may be higher because of the need to perform maintenance more frequently, use more costly repair materials, and the prohibition on using certain cleaning methods because of their effects on the historic materials. Insurance costs may be higher because the materials used to repair this structure as an historic building may be more costly.

In addition, the capitalization rate used in the income approach may be affected by the restrictions placed on the historic properties. Investors may require a higher capitalization rate because of the inability to convert the property to alternative uses to reflect market changes and, therefore, they may perceive this as a more risky investment. The assessor should analyze sales of similarly restricted historic properties and talk to investors, brokers, and appraisers to ensure that the capitalization rate is typical for this type of property or build up the capitalization rate from other sources using comparable risk rates.

Assessors should consider using Gross Rent Multipliers (GRM), as discussed in the WPAM, to value historic residential properties. GRMs may be affected by the restrictions placed on historic properties. Investors may require a lower GRM because of the higher expenses and the greater perceived risk due to the inability to convert the property to alternative uses to reflect market changes. The assessor should analyze sales of similarly restricted historic properties and talk to investors, brokers, and appraisers to ensure that the GRM is typical for this type of property.

If these properties are large, owners may divide them into apartments to provide income to help pay for the rehabilitation and maintenance for these properties. Assuming the Gross Rent Multipliers fall within a relatively narrow range, the assessor may be justified in using them to help value other historic residential properties that are rented but have not sold.

Contaminated Properties

A detailed discussion on the issues pertaining to contaminated properties and the valuation of contaminated residential properties is found in WPAM Chapter 8. Below is an example illustrating the valuation of a commercial property which is contaminated.

Example: A three-story office building contains 150,000 square feet contaminated by asbestos. An environmental engineer estimates that it will take one year per story to remove the contamination at an annual cost of $350,000 and the floor from which the contamination is being removed cannot be rented during the year of cleanup. The current annual market rent for similarly contaminated buildings is $14.00 per square foot and will be stable for the next three years. The annual expenses are the following:

- vacancy and collection loss at 10% of potential gross income,
- management at 8% of effective gross income,
- utilities at $250,000,
- insurance at $75,000,
- repairs and replacements of $60,000, and
- advertising at $30,000.

NOTE: The presence of contamination may result in higher vacancy and collection loss, management, and insurance than is typical for non-contaminated property.

Utilities, insurance, and advertising expenses are expected to increase at 3%, 4%, and 5% per year, but repairs and replacements will remain stable. Analysis of the market indicates that an appropriate capitalization rate for this type of property is 14% which includes an effective tax rate of 3%, plus an additional 2% for higher risk due to the contamination. Based on projected stabilized NOI, the property will have a market value of $9,000,000 after the contamination is removed. The Discounted Cash Flow Analysis follows. (The Present Worth (PW) Factors are taken from the compound interest tables).

Discounted Cash Flow Analysis

	Year 1	**Year 2**	**Year 3**
Potential gross income			
100,000 Square Feet x $14	$1,400,000	$1,400,000	$1,400,000
Less: Vacancy and collection loss (10%)	140,000	140,000	140,000
Effective gross income	$1,260,000	$1,260,000	$1,260,000
Operating expenses:			
Management			
8% x $1,260,000	$ 100,800	$ 100,800	$ 100,800
Utilities	250,000	257,500	265,225
Insurance	75,000	78,000	81,120
Repairs and replacement	60,000	60,000	60,000
Advertising	30,000	31,500	33,075
Asbestos removal	350,000	350,000	350,000
Total operating expenses	865,800	877,800	890,220
Net operating income	$ 394,200	$ 382,200	$ 369,780

Present Worth of Income Stream and Reversion

Year 1	$	394,200	x	.877193	=	$ 345,789
Year 2	$	382,200	x	.769468	=	294,091
Year 3	$	369,780	x	.674972	=	249,591
Reversion	$	9,000,000	x	.674972	=	$ 6,074,744
						$ 6,964,215

Present worth of the property equals $6,964,215 or $6,964,200

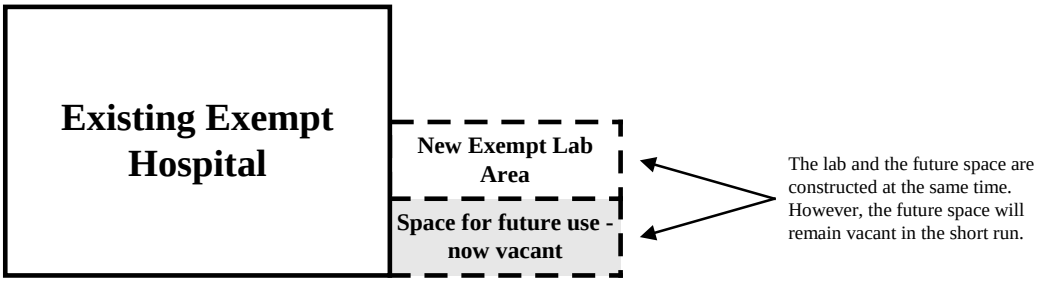
The assessment should be reviewed annually to verify income, expenses, and cleanup time. The assessor can also use discounting for non-income producing properties by deducting the present worth of the cost to cure the contamination from an estimate of the current uncontaminated market value of the property.

Hospital-Vacant New Construction

The purpose of this section is to advise how to classify newly constructed vacant space that is connected to an exempt hospital. This is building area that is attached to a hospital during a renovation, remodeling, or new construction yet remains unfinished and vacant on January 1st. Hospitals often construct oversize additions to anticipate technological and industrial changes and to reduce the unit cost of construction. We recommend that this space be exempt as part of the hospital if the following conditions are met:

- The hospital is exempt.
- The space is attached to an existing hospital.
- The projected use of the space is declared in the board minutes, in the general building plans, and in the blueprints and is consistent with exempt hospital use.
- The building specifications and actual construction-to-date include such things as floor load, electrical, HVAC, communication lines, windows, doors, hallways, and gas lines appropriate for hospital space.
- The owner annually declares by affidavit that the space will be used as hospital space that would normally be exempt under statutory and case law.

The example below shows an existing hospital with a new addition to the right of the existing building. Part of the new space will be immediately used as lab area. The other part will eventually be finished as hospital space.



Wind Energy Systems

In order to reduce atmospheric omissions and the dependence on imported fuels, there has been a national and local influx of wind energy systems. This trend is anticipated to continue locally with a recent state energy efficiency task force recommendation to have renewable energy sources account for 10% of the total retail electric sales by 2015. The following information summarizes the state and local property tax implications of wind energy systems.

State Assessment and Taxation

Section 70.112(4), Wis. Stats., provides a general property tax exemption for the property of an entity that is taxed by the state under Chapter 76, Wis. Stats. Relative to wind energy systems are secs. 76.28 and 76.48, Wis. Stats., which provide for the state taxation of light, heat, and power companies, qualified whole sale electric companies, and electric cooperatives. These entities are taxed based upon an annual license fee that is measured by the gross revenues from the preceding year. The general property tax exemption applies to real and personal property when the property is used by a qualifying utility for operating purposes.

The supplement to the WPAM provides a list of the entities that are taxed by the state under Chapter 76 and qualify for a general property tax exemption. Wind energy systems that are owned or operated by one of these entities are exempt from the general property tax and incur the gross revenue fee.

It is important to note that secs. 70.112(4)(a), 76.28(9), and 76.48(1r), Wis. Stats., provide for local assessment and taxation of any portion of an improvement that is used for non-utility operating purposes. Specifically, the percentage of fair market value that fairly measures and represents the extent of an improvement's use for non-utility purposes shall be assessed locally under Chapter 70, Wis. Stats. All utility property is subject to special assessments, which is provided under secs. 76.28(9) and 76.48(1r), Wis. Stats.

Additional utility taxation information is available at http://www.revenue.wi.gov/html/govpub.html#utility

Local Assessment and Taxation

When a wind energy system does not meet the state taxation specifications and the property is locally assessed under Chapter 70, sec. 70.111(18), Wis. Stats., provides an exemption for the wind energy system. The statute defines a wind energy system as equipment which converts and then transfers or stores energy from the wind into usable forms of energy. The exemption applies whether the wind energy system is real or personal property. This exemption does not apply to any equipment or components in a wind energy system that would be present as part of a conventional energy system. Also, the exemption does not apply to a system that operates without mechanical means (e.g. passive systems).

In order to receive an exemption for a renewable energy system, the owner of the system must obtain a *Request for Exemption of Renewable Energy System*, form PR-303 from the assessor and return the completed form to the assessor by March 1 following the January 1 assessment date for which the exemption is claimed. A copy of the exemption form for renewable energy systems is included in WPAM Chapter 17. The assessor should examine both the request and the system to ensure that the requirements of sec. 70.111(18), Wis. Stats., are met before granting the exemption.

The land where the wind energy systems are located remains taxable. Instances where the wind energy systems are used for residential or farm purposes, the land necessary for the location and convenience of the wind energy system should be classified as residential or "other."

In addition to the conventional energy system equipment and components that are taxable, any property that does not convert, transfer, or store energy from the wind may also be taxable. This can include maintenance and equipment storage buildings. As stated above, any portion of an improvement that is not used for utility operation purposes is also locally assessed under Chapter 70, Wis. Stats.

A list of wind energy systems is available at http://www.renewwisconsin.org. Additional wind energy information is available at: http://www.eere.energy.gov/.

Landfill Valuation Procedures

The following information provides a recommended procedure for valuing landfills. The income approach is used to value landfills due to the lack of sales activity. Central to using the income approach for landfills is the 1994 Wisconsin Supreme Court case *Waste Management v. Kenosha County Board of Review*. The Supreme Court affirmed the Court of Appeals' decision stating the business value of the landfill was appended to the property, and not independent of it. The Supreme Court also stated that such appended value is inextricably intertwined with the land and is transferred to the new owner when the land sells.

The following definitions are provided for this section of the WPAM regarding landfill valuation:

Airspace A projected amount of cubic yards to be filled with waste.

Airspace Amortization The annual cost of creating the cell(s).

Capping/Final Cover A series of layers of cover material placed over solid waste to prevent water infiltration, erosion and gas emissions.

Cell Landfills are constricted in phases called cells that adjoin one another, separated by a berm to contain leachate. The permitted area is divided into separate cells.

Closure The period of time after a landfill; has reached its permitted capacity but before it has received certification of closure from a state regulatory agency, during which time certain activities must be performed (i.e., capping, landscaping, etc.).

Closure Allowance Funds to be set aside annually to cover closure costs.

Daily Cover Material used to cover the working face of a landfill at the close of each day.
Footprint The horizontal area (acreage) occupied by the landfill.
Host Community Town, village, city or county wherein the landfill is located or which is within 1500 feet of the actual fill boundary. May consist of several political units.
Host Fee Negotiated fees paid to the host communities based on varying formulas.
Landfill A modern engineered way to deposit waste into the ground while protecting the environment.
Leachate Liquid that forms as water percolates through waste.
Leachate System A system in place to collect, control and convey leachate.
Licensed Cell Cell permitted to receive solid waste.
Licensed Landfill Capacity Permitted volume (cubic yard) capacity for a specific number of years.
Liner A clay and/or synthetic protective layer that is placed on both the bottom and top of landfills.
Methane A gas byproduct generated through natural decomposition of solid waste in landfills.
Post-Closure A period of time after a landfill is certified closed by a state regulatory agency, until the owner has no further responsibility – generally 30 years.
Post-Closure Allowance Funds to be set aside annually to cover post-closure costs.
Solid Waste Regular garbage from non-industrial sources.
Tipping Fee A fee paid by anyone disposing of waste in a landfill.
Tipping Fee, Gate Tipping fee paid by the general public. Higher than paid by related companies.
Tipping Fee, Net Gate tipping fee less all taxes, surcharges and host fees.
Tipping Fee, Effective Net fee less volume discounts and contract rates; actual tipping fee income divided by the annual tonnage. It is reported to run between 50 – 80% of the net tipping fee.
Working Face The active section of the landfill where waste is deposited and compacted.

Landfill Valuation Challenges

The following are challenges assessors face when valuing landfills:

- Landfill data is limited since many are owned by a municipality or county and rarely sell on the open market.
- The absence of sales limits the use of the sales comparison approach.
- Relying on cell costs and remaining licensed fill capacity has led to large fluctuations in assessments.
- A licensed land site is a primary factor in landfill valuation.
- The impact of environmental risks and the monitoring period subsequent to closure are difficult to estimate.
- Values can impact a municipality's compliance with sec. 70.05, Wis. Stats.

Solution

The assessor can use the following methods to overcome the above challenges:

- Use actual income and expense data from the subject property and reasonably comparable properties.
- Develop a value that is based upon several years of income and expense data.
- Recognize that the cap rate must reflect the substantial risks involved.
- Analyze the value during a revaluation and when changes to the economic environment occur.
- Ensure all aspects of the operation are addressed, including exemptions, personal property, land classifications, buffer areas, expansion areas, etc.
- Assessors should consult with the Equalization District Supervisor when valuing landfills.

Benefits

The following are the benefits of using the recommendations in this section:

- Landfill valuation will be uniform throughout the state.
- Appeals and refunds will be reduced.
- Assessors can develop ranges that test percentage of expenses, average tipping fee, etc.
- Section 70.05, Wis. Stats., conflicts will be reduced.

Assumptions

All landfill assets should be classified as commercial with the exception of any acres that qualify for classification as agricultural or agricultural forest. This includes the land used for capped waste storage, current open licensed cells, cells under construction, buffer areas (including previously residential properties which may continue to be rented, waste and woods), and lands purchased for future expansion.
NOTE: Assuming the land does not meet the definition of agricultural land or agricultural forest land, acres where the landfill may eventually expand should be classified as commercial when the licensing process has started for those areas. Additional acres should be classified as undeveloped.

- Consider all sources of income and the related costs. Property taxes and building depreciation are not included in the income approach. Income is the result of the operation of the landfill and includes, but is not limited to: the tipping fees, miscellaneous rentals for existing homes purchased as part of the buffer area, sales of electricity generated by burning methane gas, and sales of composted yard waste.
- Building cell costs should be expensed under ‘airspace amortization’ without any allocation as a land improvement.

- Since the income approach is recommended, it is important to note that sec. 70.47(7)(af), Wis. Stats., does not allow an appeal to the Board of Review unless the landfill operator provides the assessor with income and expense information.
- The landfill site is presumed to be a long-term entity, routinely requesting additional 'short term' licensed capacity expansions from the DNR. This activity is similar to an office building, routinely renegotiating short-term leases on a long-lived building. The most straightforward approach to valuation is using a stabilized income and expense statement and an overall rate.
- Tipping fees should not be relied upon as a source of comparison since fee configurations may not be evident.
- An outside management fee is recommended at 10% of total gross income as an additional expense.
- The market value calculated from the income approach should be allocated to all the real and personal property assets generating income. This requires allocating to exempt assets (computers and the methane waste treatment equipment), the personal property (reported annually by cost and year of acquisition), land improvements, land currently used in agricultural production, and all remaining land.
- Land devoted primarily to agricultural use shall be assessed according to the use-value guidelines for agricultural assessment. See WPAM Chapter 11 for additional information.
- Unless major changes occur in the personal property value, there is no need to revise the assessed value for personal property. Since this is an allocated value from the total, a change in the personal property value simply creates an equal, compensating change in the land value.

Background

1. Initial site inspection
2. Initial site report
3. Feasibility report
4. Plan presented to other DNR sections
5. Environmental analysis
6. Public hearing
7. DNR feasibility determination
8. Plan of operation
9. Licensing

Once a license is granted, it must be renewed on an annual basis. The renewal process also requires an updated proof of financial responsibility and feasibility study. Anyone who purchases a landfill must follow the same process. The maximum life of a landfill plan is 15 years.

Separate and parallel to licensing is the local negotiation process. The company planning to operate the landfill must negotiate with any municipality that is within 1500 feet of the fill boundary. The agreement with the communities involved will include safeguards and host fees. The calculation of the fee will vary with each agreement.

Agreements may include waste pickup, compensation, and well testing for adjacent property owners. Landfills are typically an ongoing commercial operation consisting of one or more parcels of land and will continually seek to expand. Most landfill operations will consist of one or more capped sites, an active disposal site, expandable areas, buildings, residential and agricultural parcels, personal property, land for secondary operations, buffer areas and parcels held for future expansion. Outside companies usually perform the actual collection of the solid waste. Several related activities may also occur including the collection and sale of methane gas, the generation and sale of electricity, contaminated soil treatment, and yard waste collection.

Most landfills will have an established history and a reasonably predictable future. The assumed intent of a landfill operation is to expand. There is the possibility for expansion as long as there is a demand for the landfill and room to expand. Operators may slow the rate of fill at one site and divert waste to another site to remain in operation until the newest license is granted. It is in their best interest to remain open, even if it results in temporarily diminished returns, because they have existing, long-standing contracts to service and an infrastructure to maintain. It thereby becomes important to stabilize several years of income and expense data.

Landfill Valuation

The goal is to use the best information available, and the correct methodology, to develop a reasonable and accurate estimate of the market value of the fee simple interest of the real estate and the attached rights thereon. A solid waste landfill will typically consist of the following:

1. Licensed site
2. Personal property
3. Buffer areas
4. Support land

Buffer areas provide separation from the operation and surrounding land uses. Support lands contain buildings, roads, wastewater treatment, methane gas recovery, and secondary operations. Since landfills are unique in their individual makeup they are difficult to compare. Each one has a different combination of basic elements; i.e., sources of income, methods of reporting income and expenses, stage of development, etc.

Landfill appraisals prepared for property owners and taxing jurisdictions show extreme differences in value. With a landfill, value lies with the actual license; i.e. the right to deposit solid waste in a landfill, which was confirmed by the Wisconsin Supreme Court. As mentioned previously, the Supreme Court affirmed the Court of Appeals' decision, which stated that the business value of the landfill was appended to the property, and not independent of it. The Supreme Court also stated that such appended value is inextricably intertwined with the land and is transferred to the new owner when the land sells.

A landfill license must be renewed annually or upon sale, however, the renewal process is relatively straightforward compared to the original license process. The owner's right to deposit solid waste onto the property is what makes the potential income stream possible.

When the property is sold or transferred, the ability of the land to produce income would not be retained by the grantee. The grantee may or may not retain existing contracts, which could require the grantor to build a customer base. However, the right to generate income remains with the property. Even though the license must be renewed, it cannot be sold or transferred separate from the real estate. The value derived from this license remains inextricably intertwined with the land and should be valued accordingly.

Landfills are unique, special purpose properties. Sales of active landfills are rare, difficult to analyze, and highly suspect arm's-length transactions. Potential buyers and sellers are part of a small, select group. For these reasons, the Court questioned the usefulness and reliability of the market and cost approaches to value. What remains is the income approach. Since landfills are not leased, the best source of income and expense data is the owner-operator income and expense statements.

NOTE: Although the income approach is recommended, assessors should consider all three approaches to value in determining, supporting, and defending the final value.

Income Approach

All landfills have a physical plant consisting of land, improvements, personal property, and possibly other items that contribute to the generation of income. The operation incurs expenses necessary to generate the income stream. The difference is a net operating income that can be capitalized into an estimate of market value.

The assessor should request operating income and expense statements over a number of years from the landfill operator. This should include all income and expenses relating to that particular operation. These would include but are not be limited to tipping fees for depositing waste, gas recovery, the generation and sale of electricity, the treatment of leachate and the mulching of yard waste. Pre-tax values should be averaged in order to obtain normalized figures that limit the impact of any one year.

Landfill sites can occasionally experience large fluctuations in annual volume intake and income due to such occurrences as a tornado, a large construction project or while waiting for the completion of a new expansion area. This is exhibited by an abnormally high spike or low depression in the income stream for one or more contiguous years. When this happens, look to the prior and post event annual income for your normalized numbers. This method will help avoid major year-to-year fluctuations in value.

Landfill operations that have not reached their physical limitation are expected to expand. The direct capitalization method assumes a steady and uniform income stream over the life of the property. The estimated market value, using this capitalization method, is calculated by dividing the net operating income (NOI) by the overall rate. This is the value of the land, land improvements, personal property, and exempt property that pertain to the income stream. Excess land that is classified undeveloped should be excluded. Cell improvements are considered an annualized expense and not capital improvements. The overall rate should account for the unpredictable future of a landfill's income stream.

The expansion process is complex, costly, time consuming, and may not succeed. The assessor should consider the site's expansion history, expansions that are in-progress, the owner of the expansion area, and the status of the landfill's physical limit. Keep in mind that future expansion increases liability.

The analysis assumes that the landfill will continue in operation indefinitely or at least into the foreseeable future. However, in the event that the operation is approaching final closure, the risk factor is lower and the overall rate applied should be lower than that used in the direct capitalization method. In this case, the more appropriate capitalization method would be the discounted cash flow method. This method assumes a finite, steady or variable income stream. It sums the present worth of annual income over the remaining life of the property. The value of the property at the final closure, if any, is called the reversion. The assessor should estimate the present worth of the reversion and include it in the final estimate of value.

A. **Total gross income**: The income maybe classified into the following categories: tipping fees, recycling, methane gas, electricity and other. Income can also be divided into external and inter-company. External income, or tipping fees, is generated from an outside hauler, recycling and other income. Inter-company income is income paid by the company haulers to the landfill. These haulers are subsidiary companies and report income and expenses as separate entities within the company (which internally requires each entity to show its own profit). While they pay a lower fee to the landfill than outside haulers, generally the discounted income reflects volume discounts. The income and expenses from gas recovery and power generation should also be included.

B. **Expenses**: All the expenses should be related to the landfill operation. An additional expense for outside management is recommended at 10% of total gross income. This is an expense incurred by the overlying corporation and not reported in the landfill's operating expense statement. The expense captures corporate management beyond the actual cost to operate the landfill.

Allowed Expenses

1. **Airspace amortization**

This is an annualized expense to cover the cost of cell construction. The cells are not considered capital improvements. When reporting for tax purposes, operators will amortize actual expenses for cell improvements. The reported figures should be interpreted as a reserve for replacement rather than an amortized expense. Since the income stream is tied to the rate at which the cell is filled in a given year. This expense can be recaptured or set aside for future cell construction in the form of a sinking fund.

2. Closure and post closure

These are funds mandated by the DNR and set aside for closure and post closure costs. They are based on the amount of developed cell space. They cover typical maintenance; e.g.

repairing earth slides and monitoring. They do not cover the cost of unpredictable, future expenses that are more properly associated with the risk involved in a landfill operation. Refer to the discussion on the capitalization rate.

3. Host fees

Host fees are paid to municipalities where the landfill is located and any other municipality that is within 1500 feet of the actual fill boundary. Fees will vary and are incorporated into host agreements. Adjacent property owners may also receive payments to compensate for property value loss and emotional distress.

Disallowed expenses

When normalizing expenses certain items are disallowed because they either do not pertain to the income stream or because they have been considered elsewhere in the process. Building depreciation is a disallowed expense, because all buildings and site improvements have already been depreciated within the income approach. Property taxes are included in the overall capitalization rate and are disallowed as an expense. Equipment purchased is also excluded because equipment is a depreciating asset treated as personal property.

Total expenses: The total of the allowed expenses.

C. Net operating income: Income remaining after deducting all allowed expenses and an allowance for outside management. It is based on the analysis of historic income and expense trends reported by the company. This is the income to be capitalized in the income approach. The operation is more than just the cells that hold the solid waste. The entire income stream, derived from the operation, minus all related, legitimate expenses, should be used in calculating a net operating income. The operation includes all contiguous parcels, all improvements, personal property, and exempt property.

D. Capitalization rate/Overall rate:

Discount rate and risk:

The development of an appropriate discount rate for this property is complicated by a limited investment market for high-risk properties, a scarcity of collected data and the complexity of these types of operations. First, the assessor should examine available discount rates for real estate investments at the high end of the range. These pre-tax rates are available from a variety of entities that conduct quarterly surveys for non-institutional grade investment type properties.

Typically, other real estate investments have a lower rate of risk than a landfill investment. There are unknown future liabilities: political, policy, and public opinion changes; more stringent regulations; and possibly additional taxes and fees. Given the changes that have taken place in the area of solid waste disposal in the last twenty years, one can only assume that this complex industry will continue to change, which contributes to the risk involved.

Theoretically, liability for this type of property will probably never end. On the other hand, a well-developed and managed site should eventually stabilize after capping, with a diminishing risk over time.

The overall rate for capitalizing the income stream will be high and may range from twenty to thirty percent. The overall rate allows for the recapture of the depreciable portion of the investment over the remaining economic life of the asset and any property taxes paid by the operation. Direct capitalization is recommended.

E. **Assignment of value**: For the assessor, the project does not end with the establishment of the estimated fair market value of the operation. Value must be assigned to the various components of the operation: land, buildings, other site improvements, personal property and exempt property. It is recommended that all parcels receive commercial classification, with the exception of qualifying agricultural land and agricultural forest land and excess expansion land that should receive undeveloped classification. The assessor should evaluate all parcels of the landfill operation.

Taxable personal property: The estimated market value of the personal property associated with the operation as reported by the landfill company and reviewed by the local assessor.

Exempt property: All property exempt as waste treatment or computers.

Building and minor site improvements: The estimated market value of the depreciated building structures and other minor site improvements such as paving, well and septic systems, fencing, etc.

Land residual value: The value remaining after removing the above items from the total estimated market value is the land residual value. This is the value of all the contiguous land parcels. Divide this value by the number of total acres to obtain the average value per acre. This value includes any current and closed cells. This per-acre value is applied to all non-agricultural acres. Agricultural land is assessed with the appropriate use-value. Any agricultural forest or undeveloped lands should be valued at one-half of the calculated per acre market value.

While individual components may fluctuate in value from year to year and alter the residual value, the overall value of the operation should remain the same between revaluations. However, if a property experiences a major economic change such as the end of its economic life, the assessor should review the overall value.

F. **Conclusion**: A landfill appraisal encompasses more than just the value of land and buildings but rather how the land and buildings can be used. Along with some of the land goes the right to store solid waste. This right in the form of a license is what generates income and thus value in a landfill operation. Unless a landfill has reached its physical limits, it should be considered an ongoing process.

All three approaches to value should be considered. Since landfill sales activity is limited, the income approach will be preferred over other approaches. Landfill valuations should be based upon owner-operator income and expenses since landfills are typically owner occupied and not leased.

Income and expenses should be collected for several years and normalized. The purpose of normalizing is to allow for any short term or annual fluctuations in the data. This technique provides for a steady income stream over several years. For example, waste intake may slow down as a landfill approaches capacity and speed up when a new expansion area is licensed and built. The sale of the subject could also lead to a slowdown in the income stream while the new owner applies for a license and establishes a clientele. Income could also spike in a given year due to a large demolition project or a local tornado. Averaging multiple years of income and expenses, or possibly time adjusting them to an appraisal date, will provide a better value estimate.