CHAPTER 5

THE APPRAISAL OF LAND - GENERAL

In the assessment of all real estate within the confines of a county, land is generally divided into three broad categories - urban, rural, and suburban. A brief description of each follows:

URBAN LAND

Heavily populated areas, usually within the corporate limits of a city, where buildings are concentrated and land ownership is, for the most part, in small parcels. Principal uses of urban land are residential, commercial, and industrial. It has value to the extent it is capable of rendering services to the neighboring population. Location is the primary determinant of this capacity. The value of urban land will, therefore, be almost entirely a matter of location.

RURAL LAND

Rural land is sparsely populated areas outside city limits, as a general rule, and remote from concentrated areas. Rural land ownership is usually in large acreage tracts as contrasted with small parcels and lots in urban areas. Principal uses are agricultural and mineral. It is valued largely in proportion to the abundance of nature's yields, or its natural scenic beauty. Location is important, especially in respect to markets.

SUBURBAN LAND

This classification includes fringe areas lying between urban and rural categories. Suburban land is generally thought of as land lying outside the corporate limits of a city, but not remote from concentrated population areas. It is the area into which new residential subdivisions and developments, estates, shopping centers, and industrial parks are spreading, sometimes referred to as the "urban sprawl." These fringe areas are no longer urban or rural but rather a little of each; and, for that reason, are often called "urban" areas. Land ownership in such areas usually varies from small residential lots to large acreage tracts. For the most part, principal uses are the same as those of urban areas. Suburban land is valued largely in accordance with its use and location.

In a more restrictive or definitive manner, land has five general basic uses and can be classified according to its use as agricultural, mineral, residential, commercial, or industrial.

There is another classification that may be urban, suburban, or rural, but for the most part is predominantly rural; namely, idle or undeveloped land - that is, land that has not been and cannot now be put to profitable use. While all of it may have some potential usage, the time when demand will be created for that use lies in the future, quite remotely in many instances. Here again, it should be emphasized that the tax appraiser is not too concerned about potential values; only those existing on assessment dates.

"RIPENING USE"

A controlling element in considering idle or undeveloped land, applicable to agricultural land as well is a principle of land economics known as "ripening use". With dynamic population growth in recent years and the ever-increasing need for land, there is a constant movement of rural and fringe-area land from non-use to some productive use, and from present utility to a higher and more profitable use, especially in the vicinity of those areas experiencing rapid growth and expansion. Idle land is converted into various agricultural uses, and agricultural lands into residential developments, shopping centers, and industrial parks. Within urban areas, apartments, office buildings, commercial structures, and other more profitable uses supplant residences and other inadequate structures. Land uses are seldom static but, as a general rule, land does not move freely from a lower to a higher use. Ripening costs (taxes and loss of interest) occur because the land is suspended between non-use and productive use or between the old and new uses. In the latter case, the owner is able to derive income only from the present but "lesser" use. It has been noted previously that maximum benefits or returns are obtained from land only when improved to its highest and best use. The time factor involved in the rate of absorption and holding costs during the period between non-use and productive use or between the old and new uses is a fundamental principle which must be considered; especially in the process of converting idle or agricultural land near urban areas into residential subdivisions or developments. In this connection, the distinction between residential subdivisions and residential developments should be clarified. A subdivider plats a tract of land into building lots, improves them, and sells the lots. A developer goes further and erects houses on the improved lots and merchandises completed home packages.

Subdividers had a rule of thumb method for calculating gross sales prices of lots required for profitable land promotion. It was five times the price of raw land. Most subdivisions - after deductions of areas required for streets and other improvements - contained five lots to the acre, so that the subdivider's formula, as an average, was to price each lot at his cost per acre. For example if the raw land cost was $3,000 per acre, the developer estimated that, in order to pay carrying charges, cost of improvement and promotion, and make a profit, the lots had to be sold at $15,000 each, which is 5 times the raw land cost.

Because of larger lot requirements, due to FHA regulations, zoning laws, ranch-type houses, and other causes, today's subdivider usually plans three, three and a half, or four lots to the acre, with varying formulas for prices that can be paid for raw land in order to realize a profit.

Today's subdivider (more often referred to as a developer) not only prepares the land for use, but also develops it. As a part of the development program, if the land area is large enough, the developer usually plans commercial and, sometimes, industrial sections. While some lots will be sold to other builders on a bulk basis, the developer will usually erect the houses, arrange the financing, and sell them as complete home packages. In estimating the amount a developer can pay for raw land, it is necessary to know the price range of the finished houses. Local improvement requirements are an important factor when working backward to estimate the feasibility of a development. It is doubtful any tax appraiser will have occasion to apply this method. In the event he should, engineering specifications, such as the size of sewers, mains, catch basins, and other data, will be helpful. These

costs, like other constructions costs, will vary according to local conditions, as well as with the changes in the layout of the development.

If land is subdivided or developed in anticipation of demand before it is ripe for residential or other purposes, with attendant costs of engineering, grading, paving, installing utilities, and landscaping, the owner has materially increased his carrying costs from that time until the ripening period arrives. If it is good farmland, the owner not only loses his/her investment during the waiting period, but he/she removes good farmland from the economy of the community. The history of land development in all areas is replete with land booms during which good productive farmlands were removed from the economy of the community to make way for new subdivisions or developments that never materialized. Following the collapse of each boom, the land remained non-productive for many years. (During Florida's land booms of the middle 1920's and late 1950's, many thousands of acres of bearing citrus trees and other good farm lands were removed from the economy of various communities in the State and the land remained non-productive for several years.)

Land booms or periods of intense real estate activity - when property is selling rapidly, at exorbitantly high or even good prices, with small down-payments - offer few problems for the appraiser in the way of taxpayer complaints; neither do normal market conditions, as a general rule; but when the boom or activity ends, and there is a surplus of all property, with little or no demand, the tax appraiser has many headaches. The market compass has quit spinning.

In this connection, it might be well to note parenthetically that, when those purchasing land for various utility purposes accelerate real estate activity in an area when speculators invariably get into the act and buy with only one purpose; to make the smallest down-payment possible and sell at a profit to would-be users, or speculators. Speculators purchase with no intention of putting the land to any use, but on a basis of re-sale possibilities only. In some instances land is purchased for hypothetical usage that, more often than not, never materializes. In speculative markets, land prices are skyrocketed, with little cash involved, until it becomes apparent there can be no sales at higher prices, and the house of dominoes topples over, followed by a depression in the real estate market. No appraiser or tax official, regardless of how skilled he/she may be, can appraise the speculative value of real estate, or anything else. IT IS AXIOMATIC THAT APPRAISING STOPS WHERE SPECULATION BEGINS. Under speculative market conditions, the problem faced by the appraiser or tax official is that of squeezing inflation out of values; for the appraiser it means separating inflated price from "fair and reasonable market values." It requires knowledge of valuation technique and is not always easy to do.

More difficulties are encountered in the evaluation of property in a declining market or during periods of depression and inactivity. Under these conditions, the "fair and reasonable market value" of the property will usually exceed the price at which it can be sold. In fact, a wide margin often exists between "fair and reasonable market value" and the price at which it can be sold. It is a period of taxpayers' complaints and tax appraiser's headaches.

It seems fair and reasonable that, if the tax official is expected to separate inflated "market price" from "fair and reasonable market value" during land booms or periods of intense real estate activity, he should also be expected to separate deflated "market price" from "fair and reasonable market value" during depressions and inactive real estate markets. The tax appraiser is not expected to adjust valuations in accordance with changing prices from one year to the next. The concern, at all times, is "fair and reasonable market value" as defined by the Statutes of Alabama, and not "market price." Next to a fair and equitable tax roll, the most important element of a good tax structure is that of stability, so that each taxpayer has a fairly good idea of what each years tax bill will be from year to year. With fluctuating valuations, this would not be possible.

The tax appraiser needs a working knowledge of the principle of "ripening use" in order to judge the trend of growth and rate of land absorption, especially in the absence of market data in the immediate area. The principle of discounting future values (sales prices) to present worth through the process of capitalization should be used.

Where a developer has a large number of unsold lots on hand, the economic principle of "ripening use" can be applied effectively in conjunction with proper discount factors in valuing the lots. This process usually obtains satisfactory results.

Let's assume the developer has 150 unsold lots, with asking prices of from $12,000 to $13,000 per lot (an average lot price of $12,500), and that these prices are in line with the current market for lots comparable in nature. It is quite obvious that, if all lots had to be sold within a reasonably short time and were dumped on the market, they would not bring the listed prices. (The laws of supply and demand in operation.) In that event, substantial discounts would be required in order to dispose of them. The developer's ability to obtain the prices asked will depend upon an orderly marketing program and not glutting the market, with reasonable sales promotion efforts and an ample time requirement for their disposal. Carrying costs involved during the ripening period are always a factor for consideration. Admittedly, all lots do not have a present per lot value of $12,500. The tax appraiser is faced with the problem of estimating their "fair and reasonable market value" on the assessment date. In the process, he/she needs to estimate how long it will take to dispose of all lots and the costs of carrying them until sold. Let's also assume that, from the tax appraisers study and analysis of market conditions in the area, he/she is convinced the rate of absorption will be about 25 lots per year and would require six years to dispose of all lots. Further, assume that estimated property taxes and other holding costs will approximate $600 per lot per year, and that risks involved justify an interest rate of 8% in the discounting process.

The tax appraiser has now ascertained all factors required in an appraisal of the 150 unsold lots. This includes present asking prices, which are in line with sales prices of comparable lots; the "ripening use" period, estimated at 25 lots per year, or a six-year absorption period; estimated carrying costs of all lots until sold, and the interest rate to be used in discounting future earnings (in this instance lot sales) to present value. All he/she needs to complete the process is the discount factor for each of the six years.

By reference to Table III of the annuity tables in the Appendix in the 8% column, he/she secures these factors:

First year	.9259
Second year	.8573
Third year	.7938
Fourth year	.7350
Fifth year	.6806
Sixth year	.6302

The remainder of the process is simple mathematics, as follows:

lst year - 25 lots @ $12,500 (average justified asking price) x .9259, or 25 x $11,574.00 =	$289,344
2nd year - 25 lots @ $12,500 x .8573, or 25 x $10,716 =	267,906
3rd year - 25 lots @ $12,500 x .7938, or 25 x $992.00 =	248,063
4th year - 25 lots @ $12,500 x .7350, or 25 x $9,188.00 =	229,700
5th year - 25 lots @ $12,500 x .6806, or 25 x $8,508.00 =	212,688
6th year - 25 lots @ $12,500 x .6302, or 25 x $7,878.00 =	$196,937

Total estimated present gross value of all lots	$1,444,638

If we divide the total estimated present gross value of all lots ($1,444,638) by the total number of lots (150), the result is $9,031 per lot.

To save time, taking the average of the discount factors listed for the six-year period can use a short cut. Which in this instance is .77046, and applying it to the listed price of each lot. For example, a lot listed for sale at $12,500 would have a present discounted value of: $12,500 x .77046, or $9,631.

This is the same estimated value per lot; also the same total value of all lots obtained by the first process, 150 lots @ $9,631= $1,444,650.

From these figures, holding or carrying costs of the lots, estimated to be $600 per lot per annum, must be deducted to obtain a fair market or "actual cash" value estimate.

They represent average future costs and, therefore, must be discounted in the same manner as average expected lot sale prices, as follows:

lst year - 150 lots @ $600 x .9259, or 150 x $556 =		$ 83,400
2nd year - 125 lots @ $600 x .8573, or 125 x $512 =		64,000
3rd year - 100 lots @ $600 x .7938, or 100 x $476 =		47,600
4th year - 75 lots @ $600 x .7350, or 75 x $441 =		33,075
5th year - 50 lots @ $600 x .6806, or 50 x $408 =		20,400
6th year - 25 lots @ $600 x .6302, or 25 x $378 =		9,450
	Total	$257,925

Total estimated gross value of all lots, discounted to present worth	$1,444,638
Total estimated carrying costs on all lots, also discounted to present worth	257,925
Total estimated net value of all lots	$1,186,713

This represents a present estimated average value of $7,911 per lot ($1,186,725 - 150 lots).
To illustrate further, year-by-year computations are shown as follows:

1st year	25 lots @ $12,500 x .9259 =	$289,344
	Less carrying costs on 150 lots	83,400
		$205,944
2nd year	25 lots @ $12,500 x .8573 =	$267,906
	Less carrying costs on 125 lots	64,000
		$203,906
3rd year	25 lots @ $12,500 x .7938 =	$248,063
	Less carrying costs on 100 lots	47,600
		$200,463
4th year	25 lots @ $12,500 x .7350 =	$229,700 Less
	carrying costs on 75 lots	33,075
		$196,625
5th year	25 lots @ $12,500 x .6806 =	$212,688
	Less carrying costs on 50 lots	20,400
		$192,288
6th year	25 lots @ $12,500 x .6302	$196,937
	Less carrying costs on 25 lots	9,450
		$187,487

Total net value of all lots, discounted = $1,183,713

This technique has been explained in detail to illustrate its use.

Needless to say, the tax appraiser can note any change in the rate of absorption, selling prices, or risks from one year to another; and his/her appraisals adjusted accordingly.

In using the "ripening use" principle, the judgment of the tax appraiser is vitally important in securing accurate results. In its application to idle or nonproductive land near populous centers, he/she must decide which tract will likely be the first developed and which next in successive order. This decision should come from knowledge of the rate of population growth and directional trends. He/she must have a supportable opinion as to the rate of absorption for the various outlying tracts of land. The same holds true in applying the principle to subdivisions and the unsold lots in each one. Naturally, if not over-priced, the most desirable acreage tracts and lots, such as frontage on the Gulf of Mexico, a lake, river, bayou, a golf course, park, or other recreational area, will be the first to sell. It bears repeating, this method affords a valuable tool, especially where there is an absence of market data. Even when there are a sufficient number of subdivision lot sales to establish a market pattern, the "ripening use" principle is a valuable aid in discounting future sales prices of unsold lots to present worth.

One good method of procedure for the tax appraiser to follow is to indicate on a map of the county the retail business center of each city and then draw circles around it at one-mile intervals. This will furnish him/her an accurate portrayal of vacant tracts of land within each radius (one mile, two miles, etc.) available for development and the number of unsold lots in each area.

Population growth statistics for various tracts (a census term for areas) of the county are obtainable from the Bureau of the Census, U. S. Department of Commerce, Washington, D.C. The percentage of growth of each tract within each radius can be placed on the map. In this manner, the tax appraiser has complete information in pictorial form for analysis, land or lots available in each area, and its rate of growth. All other elements being equal, the land or lots nearest the center will likely be the first to ripen into use. Many investors use this method in purchasing undeveloped land.

The five general basic uses of land and resultant classifications according to use - agricultural, mineral, residential, commercial, or industrial - were referred to in the beginning of this chapter.
There are many variations of these uses, requiring as many secondary or sub-classifications as there are variations. By way of illustration, agricultural use and classification can mean any plot or tract of land devoted to horticulture (groves, orchards, vineyards, vegetable gardens, or the cultivation of ornamental plant); raising of domestic or other animals, including horses, poultry and dairy farms, and cattle ranches; and farms for the cultivation of truck crops and staple commodities, such as sugar cane, rice, corn, soy beans, yams, wheat, cotton, tobacco, and others. Also included in this use and classification are forests and woodland, producing saw-timber and pulpwood.

The value of agricultural land results from the fertility and ability of its soil to produce crops for which there is demand and resultant marketability at prices profitable to growers. Access to markets is an important factor.

Mineral land possesses value in proportion to the quantity and quality of minerals it is capable of producing, usually discernable only by geologists, following soil borings and other exhaustive field tests and assays.

For the most part, residential land value results from population density, which creates desires and demands for housing, whether single or multi-family structures. Many components are integrated in the desires, needs, and resultant demands for housing; location, accessibility, area, topography, available utilities, transportation facilities, neighborhood, environment, zoning and restrictions, nearness to schools, churches, shopping and recreational areas, and many others.

The value of land used for business purposes is based largely on the buying power of the public and location of the property in relation to this purchasing power. Other factors having an influence on the value of commercial sites are transportation facilities, one-way streets, traffic pattern, congestion, accessibility, visibility, available off-street parking, age of neighborhood, growth and directional trends. In the downtown business section, the importance of location in relation to the volume of pedestrian traffic is noted; each passerby represents a potential customer. The character of passing traffic is also important, especially ability to buy.

Industrial land value is reflected by such elements as easy access to railroads, interstate and other highways, access roads and water transportation; dockage and storage facilities, and nearness to retail centers served; topography and sub-soil conditions, including drainage; adequate parking space and room for plant expansion; adequate sewer and water lines serving the site and power potential; labor market (both supply and prevailing wage scales); zoning, schools, churches, shopping and recreational facilities. Some industries use a large volume of water, and a river or private water supply is a valuable asset. The character of local government is sometimes a factor.

The value of any lot or other parcel of land is the aggregate of all elements affecting it, expressed in terms of money. These elements can be slotted into several categories; but as a general rule, the two principal ones are intangible and perhaps psychological and those that relate to the physical characteristics of the property. The importance of intangible elements depends largely upon intended or logical use of the land, while the importance of physical attributes is more apt to remain constant. The need and desirability of land, as affected by the various elements of value, is measured by a certain number of dollars per unit, as subsequently explained.

URBAN LAND

The observation has been made that all land is divided into two broad classifications - urban, and all that isn't urban. A vast majority of all urban land is devoted to residential usage; other uses are commercial and industrial. In each county, other than those predominantly rural, residential properties comprise more than 65% of the tax appraiser's volume of work.

The generally accepted valuation process for all classes and types of property comprises three approaches to value, fully described in a previous chapter. Without a working knowledge of these principles, the tax appraiser's duties cannot be performed in the most effective manner. With a full understanding of them, the official is in a position to solve almost any valuation problem that arises.

In the appraisal of vacant residential lots or tracts, the sales comparison approach usually affords the most accurate method of evaluation.

In estimating values of single-family residences and duplexes, the cost and sales comparison methods should be used. Only in rare instances will the income approach be used. It is employed occasionally in appraising the hybrid duplex, more often where the owner does not occupy one of the units. Where properties are improved, land values are estimated by residual processes.

In appraising apartment structures, whether traditional, modern high-rise, or garden-type, commercial or investment properties of all types; the three approaches to value furnish most accurate results. When a building or other improvements occupy a site, a separate evaluation of land is made by sales-comparison and residual methods.

In the evaluation of vacant industrial land, the sales-comparison method affords the best approach. Where the land has industrial plants, warehouses, and/or other improvements on it, the sales-comparison and cost approach are used primarily, supported by the income method, where possible. A separate appraisal of land involves use of residual techniques previously explained. (The income approach is used where a fair rental value of the subject property is ascertainable with reasonable accuracy. For example, a warehouse containing 40,000 square feet, with a going community rate of fifty (50) cents per square foot, would have an annual gross rental value of $20,000, provided a demand existed for the space.)

The first step in estimating and recording land values for assessment purposes is proper identification of all properties in the county. This is accomplished by means of a set of tax ownership maps. Methods of preparing and using such maps were fully described in Chapters 3 and 4 of this manual. However, repeating them should emphasize the importance of some phases of this procedure.

Since all basic values of subdivided lots should be expressed in terms of "front foot" or "lot values," except those to be estimated on a square foot basis, land value maps should be prepared for each section of the county. In the preparation of base value maps, zoning, utility, improvement, and other maps may be of considerable help.

The common and most convenient practice involves use of urban maps of larger scale than rural areas. More information is required and recorded on maps of urban districts - sales; asking prices; offers, if any; rentals; utilities; zoning, etc. - than on those of rural areas. Central commercial districts or core areas usually require larger scale maps than other urban areas; 50 feet to the inch is a preferable scale. A lot in a business district (50 x 100 feet) on a small-scale map (200 feet to the inch, for instance) will not provide sufficient space for recording essential information. On the other hand, in rural areas, with large farms or tracts of unsubdivided land, all data can usually be posted conveniently to maps drawn on as small a scale as 400 feet to the inch.

The next step is compilation of data, especially that pertaining to vacant lots and tracts of land. Since "residual" techniques are sometimes employed in the evaluation of land, all available data should be assembled for study, analysis, and comparison - market, cost, and income. The entire program of assembling, analyzing, and utilizing this information was also explained in Chapter 4 of the manual.

Charts or grids showing land or property sales analysis and adjustments should be prepared from data on hand, somewhat on the order of the specimen incorporated in Chapter 4 of the manual. These charts, properly prepared, will show adjustments for time, area, shape, utilities, location, elevation, zoning, and other factors and furnish valuable aids in determining base land values and land value units to be used in preparing appraisals and explaining them to taxpayers.

When the appraiser has prepared adequate land value maps for various sections of the county and compiled all available data, the next step is posting data to the maps. Following completion of this phase of the appraisal program, he/she is in a position to establish tentative land value units for each block and place them on all lots. To illustrate, let's assume that Lot 4 (50 feet) in a certain block has been sold at $5,000, and that all data has been posted on the map. A tentative land unit of $100 in small figures should be printed directly in front of that lot. This affords an instant picture and comparison of tentative land units in the area under consideration.

Although each improved property is valued as an entirety, land and buildings are appraised separately. By a separate evaluation of land and improvements, the appraiser is able to demonstrate whether or not the improvements are properly or poorly suited to the site. Separate value estimates of site and improvements are totaled, followed by a comparison of the result obtained by the summation method with the market for similar or almost similar properties.

In the final process of correlating data and making market comparisons, all elements of value must be carefully considered in order to produce a value estimate or assessment on each parcel of real estate in compliance with requirements of Alabama tax laws - "fair and reasonable market value" and "equality of assessments."

Units of Measurements

Standard measures have been devised and adopted for the evaluation of land. As a general rule, residential land is appraised, or assessed, on a lot or a front foot basis, and commercial land on a square foot or front foot basis, industrial land on acreage or square foot basis and unplatted tracts, agricultural, and mineral land by the acre. Land occupied by shopping centers, motels, and large complexes, because of area requirements for parking, is usually purchased, appraised and assessed on a square foot basis.

Appraising or assessing urban land on a square foot basis will, in many instances, afford more accurate comparisons. In other instances, results obtained by the square foot method fail to reflect correctly the relationship of value to street frontage. For example, a lot having a street frontage of 100 feet and a depth of 300 feet has a land area of 30,000 square feet. A lot in the same price zone that has a street frontage of 300 feet and a depth of 100 feet also has a total land area of 30,000 square feet. Let's assume a square foot value, as indicated by sales of comparable sites in the area and other factors, of fifty (50) cents. Each lot will then be ascribed a value of $15,000 when, in fact, it is quite obvious a lot having three times the street frontage of the other one should have a higher value. The square foot method can be employed at times in establishing or making comparisons of land values, but a lot of caution must be exercised in its use. Otherwise, glaring errors will result, as shown above. In using either the front foot or square foot method, it is always preferable to compare lots having similar street frontages and characteristics.

Formulas can be worked out for quick conversion of either method to the other. By way of illustration, if all lots have a depth of 100 feet, the front foot value will be 100 times the square foot value and the square foot value one (1%) percent of the front foot value.

Another disadvantage of the square foot method is that it requires more time in making calculations.

Before entering any front foot values on land maps, either the appraiser or some qualified member of his staff should carefully observe each lot in the area under consideration. This is the only way by which the actual characteristics of each lot and surroundings that influence its value can be taken into proper account.

For example, lots above or below street grade should be indicated on the map if the variation is sufficient to give it a lower or higher value than adjoining lots. If above grade, a plus sign and figure should indicate the fact, such as +5 or +9, if below grade a minus sign and figure should be employed, such as -5 or -9. These plus and minus signs and figures should be placed on the proper portion of the lot in order to reveal the actual condition found. Thus, a lot at street grade in front but 10 feet below grade in the rear would be recognized by anyone with land maps at some later time.

Appraisers should be on the alert for neighborhood influences that affect value and result in exceptions to standards adopted. Residential lots fronting on a golf course, park, or other recreational facility, the Gulf of Mexico, a lake, bayou, or river will generally command a higher market value

than others in the area. On the other hand, the presence of a gasoline service station, public school, church, fire station, railroad tracks or billboard will ordinarily adversely affect the market value of lots in close proximity.

Needless to say, lots on unpaved or poorly lighted streets, or in areas where the utilities and public services are inadequate, will be less valuable than those fronting on paved streets and which have adequate street lighting, utilities, and public services.

Lots in the central retail business district, where pedestrian traffic is heaviest and rent is highest will have a greater value than others. Attention has been called to the adverse effect of a bank or financial institution on adjacent lots in a commercial district. The same is true of a park or church. Many beneficial and adverse influences on business sites could be noted.

Normally, the effect of such influences on land values, including nuisances, will be reflected by area sales analyses.

Restrictions in the use of land by virtue of laws and regulations, such as zoning laws and building codes, exert strong influences on land values and resultant land value units, both favorable and unfavorable.

Unrealistic zoning has been a cause for alarm in many areas. In spite of available data as to the amount of land required for commercial or industrial purposes in proportion to population (Urban Land Institute, and others), there is evidence in some quarters that too much land has been zoned for such uses. In other areas, zoning is inadequate, with a resultant lack of protection from adverse influence.

When a tract of land is platted into residential lots, without improving the land in any way, this fact, in itself, does not create a demand for the land or make it any more valuable. In like manner, the zoning of land for commercial or industrial purposes does not necessarily create a demand for such uses. In fact, the usual result of over-zoning is a diminution in value of all lands similarly zoned. <u>The mere act of zoning land does not create demand or value any more than platting a tract of land into lots creates demand and value for the lots.</u>

Many appraisers have the erroneous impression that platting lots or zoning land for commercial use creates land value, overlooking the basic principle that the actual use of a property creates value. A safe rule is to follow use and sales of comparable or nearly comparable properties that result from such use. For example, let's assume that old-style two-story residences except one corner that has a doctor’s office on it occupy a block. Through the doctor's influence, the block has been zoned "commercial," but owners of the homes are "old-timers" who, for sentimental reasons, do not want to relocate. There has been only one sale in recent years, no listing, and only one offer to purchase. To appraise all homes in this block on any basis other than residential would likely incur unfair tax penalties because of zoning. Appraisals should not be elevated because of a reasonable probability of

zoning change, unless, as a result of such probability, a sufficient number of sales occurred to establish a market pattern.

In some areas, out-dated building codes have had adverse effects on land values. During the years since World War II, a revolution in structural designs and materials has occurred, and many building codes have not been revised to meet changing conditions. Adverse effects on land values are disclosed when applications for building permits are denied because new designs and/or materials which do not meet antiquated code requirements are specified in plans submitted. The adverse effect results from inability to use the land for such improvements. However, it is not apt to be a condition requiring consideration on the part of the tax official. (Some taxpayer might contend the appraisal on his property is too high because of an obsolete building code preventing highest and best use of the land.)

Assuming the appraiser has familiarized himself/herself with community and neighborhood influences on land values and has posted all pertinent data to the land maps, he/she is ready to reduce his/her knowledge and data to land value units for appraisal purposes. He/she is in a position to establish such units as will be consistent from street to street and from one district to another, with comparisons relatively easy to make and explain.

The appraiser's decision concerning land value units to be used constitutes a vital phase of the entire process of computing land values by any standardized method. If his/her determinations are accurate and consistent, the appraisals that result from their application will be fair and equitable.

The value of each parcel of land is computed by applying the appropriate unit price to the quantity of standard units in that parcel - 50 front feet x $20 = $1,000.

Rules and Formulas

The quantity of standard units is determined by plus or minus adjustments made for variations in depth, shape, and other deviations from the standard adopted for each class of property in each area. The increment in value attributable to corner location, alley access, and other types of auxiliary frontage is listed according to a standardized method.

This points up another difference between methods used by tax appraisers and fee appraisers. The appraiser, in order to obtain a higher degree of equality in his assessment roll, is, at times, justified in applying such factors or formulas as land depth tables, corner and alley influence factors, and rules for appraising irregular-shaped lots. On the other hand, the fee appraiser is never justified in their use, except as checks on values estimated by more proven techniques.

Before describing methods for obtaining and adjusting land value units, a word of caution is not amiss. The appraiser must have a working knowledge of valuation methods and combine that knowledge with common sense and integrity in applying rules and formulas. If the appraiser's

judgment is sound, rules and formulas would have to be unsound to produce poor results. On the other hand, if the appraiser's judgment is not sound, the most perfectly conceived and applied rules and formulas cannot possibly produce good appraisals. There are no rules, tables, or formulas that can be mechanically applied to evade the responsibility of using knowledge and good judgment in carefully weighing and considering all evaluation factors. Therefore, extreme caution should be exercised in any use of rules and formulas, with latitude allowed for varying factors attributable to each lot or parcel of land.

In appraisal practice, a "unit front foot" or "unit foot" is assumed to be a strip of land one foot wide, fronting on and lying perpendicular to the street, located in the middle of the block, and having a depth equal to the standard depth found to the normal or predominant in the locality. Let's assume a residential lot, 50 x 125 feet, with an estimated value of $2,000. It is in a section where the standard depth is 125 feet. The front foot or land value unit is determined by dividing the value by the frontage, which is $40; $2,000 / 50 = $40.

Various values of standard depth lots developed in each block by use of valuation techniques should be posted to maps delineating property ownership boundaries. As previously explained, the value estimate of each lot, divided by the front footage, determines its front foot value. Usually a single front foot value is assigned all lots of each block frontage. A fair average of front foot values developed in each block frontage should be selected as the tentative land value unit for that block, unless there are conflicting values which are not compatible. For example, if some of the lots reflect front foot values of $35, some $40, and others $45, an average of $40 per front foot for the block can be reasonably assumed; and the tentative land value for the block would be $40. Where conflicting land values are too severe for conciliation by a factoring process, or no values have been developed for some blocks, other techniques must be used to; for example, the sales comparison method, with adjustments for varying factors. There will be occasions when it will be advisable to assign different land value units to portions of the same block, especially where blocks are unusually long. A long block sometimes tapers off in value from one end to the other, and such changes should be recorded on the land maps. The point where a change in land value unit occurs is known as the "break point" and is usually indicated by an upright line, with land value units and arrows pointed on each side, as follows: ←$100→ | ← $120 →

Discretion is required in establishing front foot values and resultant land value units. By "front foot values" is meant initial front foot land values reflected by use of generally accepted evaluation techniques. "Land value units" are those units of land value that result from an application of standardized rules and formulas for placing all lots or parcels of real estate on a comparable basis for appraisal purposes.

Once front foot, or initial land value units have been determined for all blocks in an area, they should be neatly transferred to land value maps. In this manner, ready comparisons of units adopted can be made block by block. After posting all units to the maps, it will be observed that, as a general rule, units for the various blocks gradually rise and fall in rough proportion to distances from higher value

centers. Although block outline maps are preferable, ordinary tax maps or land value maps are usually adequate for the purpose.

As a general rule, vacant lots are seldom found in built-up commercial districts, so that lot sales are practically non-existent. In the absence of such sales, residual methods are required in estimating land values and land value units. In using these techniques, rental information is extremely helpful. For ready comparison, rentals (ground floor only) should be worked out on a front foot basis and recorded on land maps with other data. To avoid confusion, different colors should be used for the various types of data, unless a separate map is used for recording rental information. To illustrate, if a store 20 feet wide is rented at $2,400 per annum, the rent per front foot is $120 per annum, which is the figure to be recorded on the land map. In the process of posting rental units to land maps, the appraiser should exercise extreme caution with reference to varying depths of commercial spaces. A rental unit of $120 per foot for a store with a depth of 100 feet cannot be compared with a rental unit of like amount for a store having a depth of only 50 or 60 feet without an adjustment for the variable in depth. For ease of comparison, rental units are sometimes calculated and posted on a square foot basis. The appraiser must also be careful to distinguish between gross and net rentals. If it is a net rental, taxes, maintenance, and insurance costs should be added to the net amount in order to place all properties on the same basis for comparison.

DEPTH FACTORS

Lots in the same block sometimes vary in depth and will frequently vary sharply from one side of the street to the other or from one section to another. Normally, an increase in depth of land increases the value. However, in the case of residential lots, the increase in value is not proportionate to the increase in depth. (This principle does not apply to most commercial lots, as subsequently explained.)

Until recent years, it was conceded that, for both residential and business lots, most of their value was in portions nearest the street, so that the farther a foot of land receded from the street the less useful it became and the less its value. In order to gauge such differentials more accurately, various depth factors were devised in chart form. These charts are tables of factors (percentage or decimals) for various lot depths. Depth influences are defined as increases or decreases in the value of lots because of depths greater or less than an adopted standard lot depth for the area.

In the appraisal process, like properties must be compared with like properties. To reduce all lots in an area to a like status, the depth factor for each lot that varies from standard depth is multiplied by the land value unit of that lot. The result represents the effective front foot value or land value unit of that particular lot as compared to the adopted standard depth lot. By way of illustration, let's assume the lot previously referred to, 50 x 125 feet, with a land value unit of $40, is in a block where the standard lot depth is 150 instead of 125 feet. In this instance, the depth factor for a lot having a depth of 125 feet is .93 (see 150 foot standard depth table in the Appendix) so that, instead of a $40 land value unit, we have a $37.20 unit; $40 x .93 = $37.20. This land value unit multiplied by the

front footage, 50 feet, results in a value of $37.20 x 50, or $1,860, instead of $2,000 for a lot 150 feet deep.

Several different sets of depth factors are in use. A chart that shows a comparison of 14 depth tables is included in the Appendix of this manual. Other tables provided in the Appendix have been used successfully as guides for many years by a nationally known mass appraisal company.

A depth table comprises two columns of figures. The left-hand column is a series of different lot depths, and the right-hand column is a series of "depth factors." By "depth factor" is meant that percentage figure which, when multiplied by the land value unit of a standard lot, results in the land value unit of a rectangular inside lot having a depth equal to the figure in the first column of the depth table. When the land appraiser of the assessor's office has a depth table and the land value unit, the evaluation of a rectangular inside lot is a simple mathematical calculation.

The first effort to measure the effect of depth upon comparative usefulness and resultant value that each foot (counting from the street) adds to the usefulness and value of the entire lot was a crude set of factors known as the "4-3-2-1" rule. In its application, the front 25 feet of a lot 100 feet deep is given 40% of the value; the next 25 feet, 30%; the next 25 feet, 20%, and the last 25 feet, 10%. So that, if a lot with a front foot value of $200 had a depth of only 25 feet, the land value unit would be 40% of $200, or $80; a depth of 50 feet would have a land value unit of 70% of $200, or $140 per front foot; and a lot 75 feet in depth would have a land value unit of 90% of $200, or $180. There have been instances where this rule has been modified for application to lots of varying standard depths; not merely those with a standard depth of 100 feet. As modified, the rule is to apply 40% of the land value unit to the front quarter of depth; 30% to the next fourth; 20% to the next quarter, and 10% to the last quarter. In using this method, if the standard lot depth is 200 feet and the land value unit $200, the front 50 feet would have a value of $200 x .40, or $80; the front 100 feet (half of the lot), would have a value of $200 x .70, or $140, and the front 150 feet a value of $200 x .90, or $180. The principal commendation of any form of the 4-3-2-1 rule is its ease of remembrance.

In 1866, Judge Murray Hoffman ruled in a New York court case that the first half of a lot 100 feet deep was worth two-thirds of the value of the entire lot, which established a legal precedent for determining land values in relation to depth. In cooperation with Henry H. Neill, the "Hoffman-Neill" rule, a refinement of the Hoffman rule, was developed.

Probably William A. Somers made the most notable contribution to estimation of land values proportionate to depth about 1909, when he devised a depth curve whereby the percentage of land value for each foot increment in depth was established. The depth curve was the result of analyses of land value of a large number of parcels in St. Paul, Minnesota.

Since that time, numerous depth tables, based upon the principles first enunciated, have been developed, including the "one-third front, two-thirds rear" rule developed by Alfred D. Barnard of Baltimore, Maryland. In its operation, the front third of the lot was given half of the entire value of

the lot, while the remaining two-thirds carried half of its total value. An examination of all such tables reveals a striking resemblance to fundamental variations of value relative to depth.

In preparing or adopting depth tables, these facts should be kept in mind. The first depth factors were devised about 100 years ago; the Somers curve was developed shortly after the turn of the century; and all factors were related primarily to lots in commercial districts with a standard depth of 100 feet. The underlying theory was that street frontage afforded access to pedestrian and vehicular (horse and buggy) traffic as well as, availability of store windows and advertising space.

In those days, most residential lots were deep, even where narrow, with a home in front and horses, cows, and chickens occupying the rear portion - people at one end of the lot; animals and flies at the other.

In the past 85 years - since inception of the Somers curve - this nation has moved rapidly from "horse and buggy" days into a "motor" age, and now the "jet" age, each having a tremendous impact on the country's economy, land uses, area requirements, and values. A laborious discussion of various transitions and resultant effects is not essential or even necessary for an understanding of today's conditions, or the advisability of using depth factors, and the extent to which they should be applied.

The automobile has caused a violent revolution in our economy, customs, and standards. In the case of residential land, there has been a gradual but radical change in location factors and styling of homes, which has altered land use requirements and lot sizes. At first, stables were built on back streets or alley lines where stables had been. For greater convenience, this trend was followed by a reduction in lot depths and construction of garages nearer living quarters. Then, for maximum display and still greater convenience, house designs were widened in front, with less depth, and the garage was included as a part of the home or attached to the side. When a house occupied a corner, the built-in or attached garage often faced the side street. Today people are literally driving into their homes, so that more frontage and less depth is usually required for the wider ranch-type or split-level house. Residential lots have gradually been widened and shortened. There are exceptions, of course, where land areas vary from a larger-than-normal building site to spacious grounds.

The building of better roads, including interstate and other highways, resulted in an exodus from urban to suburban areas, with a sharp upgrading in use and value of outlying land. While the general pattern of home and site is much the same in the suburbs as in cities and towns, many suburban residences occupy larger tracts of land.

Even though residential sites have become wider, with less depth, the same principles of evaluation and assessment apply, and depth tables can be used advantageously for reducing residential land value units to a state of conformity and for equalizing assessments.

Any depth factors prepared or adopted should be used cautiously, as guidelines only. Without good judgment and common sense application, they become crutches to support unrealistic assessments.

(Formulas for developing and changing depth tables are available in "Urban Land Appraisal," published by the International Association of Assessing Officers).

The practice of many developers is to use "flat" lot prices, regardless of slight variations in width or depth. In such instances, the appraiser is justified in abandoning the use of depth tables. When lots in a subdivision or development are similar in all respects, with almost identical dimensions, and a price pattern has been established, it is not necessary to make time-consuming depth factor computations.

The automobile has had a much greater impact on depth factor usage for assessing commercial land. At the time the private passenger car began emerging as a dominant factor in transportation, there was little need for customer parking and little thought given it by merchants. As new commercial districts expanded, practically all lots were platted to a depth of 100 feet, which had been the custom for more than a century. The average commercial structure of those days had a depth of 60 feet. The back end of the lot was used for loading and unloading merchandise, with practically no consideration given to parking, other than for storeowners and employees.

Since the tremendous increase in the number of automobiles in recent years has created such a scarcity of parking facilities in downtown areas, the back portions of business lots have become as valuable as street frontages. For that reason, it is seldom advisable to use depth factors in the assessment of land in central core areas. Downtown parking conditions vary from one community to another. Some cities and towns have provided free parking, public-parking lots with meters. In others, parking decks have been provided by private enterprise, while in others there are insufficient facilities, with a resultant gradual deterioration of the downtown retail business district. Many large department stores and other business concerns provide customer parking, either on the premises or nearby parking lots.

Prior to the time the demand for parking and drive-in facilities became so acute, the construction of buildings with foundations for additional floors was not unusual. Today, faced with the necessity for expansion, buildings are not going up but out. Banks, public utility companies and others are adding drive-in facilities and, as stated, providing private customer parking.

In many, perhaps most instances, lots in the rear or vicinity of such business concerns have sold for as much as those fronting on main streets. Even when sold at lower prices, their value cannot be accurately measured by depth tables, unless factors composing such tables have been prepared in conformity with local conditions. Using accepted approaches to value, especially the income approach, previously explained, can usually produce more accurate results.

Scarcity of parking facilities in central core areas has been a major contributing factor to the origin, development, and popularity of shopping centers in fringe and outlying areas, providing ample parking, usually on a basis of three or four to one; that is, three or four square feet of parking to each square foot of merchandising area. What is generally referred to as "preferred parking" is that area on the street, located between the street and the store building erected on the rear of the site. Shopping centers are usually constructed in this manner to provide preferred parking.

Because most shopping center sites were originally purchased on a square foot basis and most assessments have been made on that basis, their values in many areas have not kept abreast of central business property. This has created some dissatisfaction on the part of downtown owners who complain they are discriminated against. In some instances, where valuation techniques have not been correctly applied to both classes or property, their complaints are justified; but, when the right methods are properly used, the "actual cash value" and an equality of assessments of both property classifications will result, regardless of the fact downtown property is on a front foot basis and shopping centers on a square foot basis.

SHOPPING CENTERS

Space does not permit a full discussion of the many elements involved in site selection, design, construction, operation, and evaluation of shopping centers. This information is obtainable from the Urban Land Institute. However, it should be explained that a shopping center is a group of stores and service operations, usually under one ownership, with ample free customer parking provided. The three types described by the Urban Land Institute are:

1. The Neighborhood Center. It is usually located on a site of from 4 to 10 acres and provides for the sale of daily living requirements, known as "convenience goods," such as foods, drugs, hardware, and such personal services as a barber shop, beauty salon, shoe repair shop, and others. A supermarket is the primary tenant in this type of center, generally in the middle, with stores and service areas on each side.

2. The Community Center. In addition to "convenience goods," it provides a wider range of facilities for the sale of "shopping goods," such as ladies' and men's apparel and furniture, and may include banking, professional services, and recreational facilities. A junior department store or variety store is the principal tenant in this type of center, which is usually located on a site from 10 to 30 acres.

3. The Regional Shopping Center. A center of this type provides a variety and depth of "shopping goods" comparable to a central business district, including general merchandise, apparel, and home furnishings, as well as a variety of services and may include a motion picture theater and other recreational facilities. At least one major department store of generally not less than 100,000 square feet of store area is the principal tenant in this type of center, which is usually located on a site of 30 acres or more. Many shopping centers of the regional type have two or more major department stores (“anchor stores”), around an enclosed mall with boutique stores between. Some are multi-level with stores above and below.

In the assessment of shopping centers and large motels, their owners often contend that, in evaluating land used for parking purposes, it is unrealistic to apply the same square foot or front foot land value units used in downtown sections, because the parking area is strictly an overhead item serving only to enhance the value of the land on which buildings have been constructed. These parking areas,

they claim, are not fully used except at times of peak activity; and, if these facilities (on which they pay taxes) were not supplied by them, they would probably be provided, as in many downtown areas, by the municipality without benefit of taxes and at the expense of all taxpayers of the community. Shopping center owners also contend that, in furnishing outdoor lighting, policing, traffic control, and landscaping at their own expense, they are providing services that normally would be supplied and paid for by all taxpayers of the community.

On the other hand, if these parking areas did not generate a sufficient volume of business to justify costs of acquisition and maintenance, they would not have been provided. Many large concerns, such as Sears, the "Allied" chain of department stores, J. C. Penny, and others, have made extensive economic studies to ascertain the amount of business attributable to each parking space. They negotiate all land purchases or leases, as well as store leases, on a basis of these data. The end result is generally the same, whether the total land value is estimated on an average for the entire site, or whether more value is allocated to land occupied by buildings and less to parking areas.

Since conditions vary greatly from one community to another and shopping centers and motels differ as to location, size, operation, and other respects, the appraiser must apply valuation techniques, tempered with common sense, in each instance. In using generally accepted approaches to value, shopping centers should be compared to shopping centers and motels to motels wherever possible. If not possible, other accepted methods of evaluation must be employed.

DEPTH FACTOR SUMMARY

In appraising residential lots, the principal function of depth factors is to equalize lot values when a variance in depth exists. Even when two lots in the same block vary in depth but are known to have approximately the same market value, the owner of the one that is less than standard depth is apt to complain that his appraisal is too high by comparison. Equalized values generally mean better-satisfied taxpayers.

Stock depth tables seldom give accurate results. Depth charts should be prepared or adjusted to the standard or predominant lot depth of the area under consideration. For example, it is not very practical to use a 150-foot depth table where all lots in the area are only 110 feet deep or to use a 100-foot depth chart when all lots are 150 feet deep.

It is not necessary to use depth tables for residential lots when all lots are practically the same size and are being sold on the same flat per lot price basis.

It is seldom necessary or advisable to use depth factors in the assessment of business lots. Standardized appraisal techniques will produce far more accurate results.

CORNER INFLUENCE

Up to this point, the discussion regarding the use of standards and formulas in determining land value units for assessment purposes has dealt only with establishment of land value units for the interior of the block; that is, lots removed from corner advantages. There is an enhancement in usefulness and, hence, in value, which, in some instances, accrue to those lots located on or in close proximity to street corners, especially in retail business district. This added usefulness and value enhancement is known as "corner influence."

One plausible theory underlying value increment of corners is that a corner lot is equivalent to two lots and should be treated as such; one fronting on the main street, and one on the side street; so that the depth of one becomes the frontage of the other.

Until comparatively recent years, it was assumed any corner lot was more valuable than a similar inside lot and that this value diminished in geometric proportion with each receding foot of frontage from the side street. Recent studies have demonstrated the fallacy of such assumptions. There are both advantages and disadvantages in a corner location, which must be properly weighed and evaluated.

Investigations have revealed that, in most residential sections, corner lots seldom command higher prices than inside lots of comparable size and characteristics. Zoning laws, with building set-back requirements for each street, sometimes adversely affect the relative value of corner locations. Since zoning laws vary from one area to another, often widely, it is neither possible nor necessary to discuss their many ramifications. Suffice it to say the appraiser should become familiar with zoning laws and building code requirements in his/her county and study the effects on corner lots. In areas zoned for apartments, there have been instances of such severe set-back requirements that it was impossible to improve a single corner lot or even a double corner without acquiring additional land. Then, too, there is usually more noise, dust, and fumes from traffic where a lot fronts on two streets, especially if both streets are heavily traveled. Corner lots require more care, privacy is limited, and the presence of children or elderly people raises the issue of safety. In some jurisdictions, because of double frontages, taxes are higher. Paving, sidewalks, and/or sewer assessments, if any, are likely to be higher on a corner lot.

The additional value of corner lots in commercial areas is usually in proportion to the relative value of the side street frontage.

The extent to which utility and value are added because of location at intersecting streets cannot be measured mathematically. It can only be estimated on a basis of community experience.

It cannot be emphasized too strongly that, in modern assessment practice, corner premium factors are, for the most part, out-moded and extremely difficult and hazardous to use.

Another accepted and perhaps the most practical method of reflecting corner value enhancement is that of increasing the land value unit of the Main Street frontage without attempting to use uniform or definite percentages or factors. Properly applied, this system produces accurate results and is easier to explain to owners of corner lots. Explanation of corner premium percentage or diminishing factors would likely be confusing and difficult to comprehend.

CORNER INFLUENCE SUMMARY

Prior to the formulation or adoption of a definite rule governing the zone of corner influence (distance back from the side street), the appraiser should make a thorough study of existing conditions in each urban area of the county where the rule is to be applied. This zone of corner influence will differ from one area to another. It is usually a good rule to extend the zone of corner influence to the next lot line, or unpenetrated building wall, unless the corner property has more than 100 feet of frontage on the high value street or less than 75 feet of such frontage. It is not believed the zone of corner influence should ever extend more than 100 feet from the side street.

In the formulation of corner premium factors, or the adjustment of those prepared for use in the county, the appraiser should be certain they are based on personal experience and the findings of his/her studies and analyses. They must conform to local conditions.

A number of systems, which have been used, are too technical and complicated for general use and have been omitted in this discussion. Simple systems are more easily applied and give results equally satisfactory, if not more so.

The appraiser should not make rigid rules for the application of corner influence. They should be flexible at all times.

Any method devised for determining corner lot values must take into consideration each of the many varying factors involved.

Highway corners are in a different category from those in retail business districts. In estimating their value, it is believed more equitable results are obtained by using the square foot method. Comparisons are easier to make in this manner; but as previously cautioned, care should be exercised in relating highway frontage to land area. Accurate comparisons are not possible unless there is a similar ratio of highway frontage to land area in the sites under consideration.

There are generally two different prices for highway corners; those paid for commercial usage and above-the-market or, in some instances, seemingly exorbitant prices paid by oil companies for strategic or prestige locations. Prices paid by oil companies do not furnish reliable bench-marks for assessed valuations in all instances.

Investments in gasoline service station / convenience store sites are predicated not only upon present or ultimate profits from sales of gasoline, oils, food and miscellaneous items, but also ability to obtain company prestige in a sectional, state-wide or nation-wide manner. Many corner locations are valuable from an advertising or prestige standpoint or to secure company representation in a highly competitive situation. This applies particularly to station needs in a substantial, growing area where the company is not represented and feels it necessary to protect its credit card holders. In many, if not all purchases of the sort, "premiums" are paid for certain corners. In some areas, these prestigious locations have commanded prices in excess of their market value to ordinary users or their ability to earn a fair net return on the capital investment. Many outlying sites in southern cities have been purchased at prices ranging from $3.50 to $10.00 per square foot and considerably more in some instances. A major oil company paid a price of $1,000,000 (approximately $40 per square foot) for a strategic triangular-shaped site at the junction of two principal streets in one southern city. In acquiring these "status sites," expected patronage is considered; but the most important factors, also long range in nature, are advertising advantages and company prestige. Sales of this character are for "special use," with premiums paid for them, and cannot be considered indicative of true market value or "fair and reasonable market value." For that reason, extreme caution must be used in the process of analyzing sales of corner properties to the end that appraised values of other corners will not be unduly influenced by them. The sale of one corner at a high premium does not mean other corners can command such high prices, even those at the same intersecting streets. As a general rule, land appraisals are based upon average land value units for each block-front, with such premium factors applied to corner lots as will reflect their fair relative values.
It is not believed to be possible to lay down rules or formulas for the assessment of “all” corner lots. As often stated, standardized appraisal techniques can be used to solve most problems of this nature, especially when applied by trained and experienced appraisers.

The two methods of measuring the additional value of corner locations, previously described, are:

1. Percentages
2. Increasing inside unit foot values

In employing either of the two methods, the following factors must be given careful study and analysis:

Area affected by the corner influence.
Utility of the property.
Amount of main street base value and ratio of side street base value to it.
Value relationship between the zone of corner influence and the adjacent interior lot.

ALLEYS

Where an alley extends along either side or in the rear of a commercial property, it generally adds some value to the lot because it affords loading and unloading advantages but it is doubtful an alley adds any value to a residential lot.

In today's modern residential developments, alleys are usually omitted. It is the contention of planning engineers that a side alley is a detracting influence to a dwelling site and an alley in the rear merely affords a dumping place for rubbish and waste material. Most alleys serving residential lots, especially rear alleys, become cluttered with unsightly junk and trash heaps.

In those areas, commercial or residential, where alleys divide the blocks in half, with lots on each side, any added value because of alley influence is generally reflected by market transactions. Where there are sufficient sales to establish a value pattern, it is not necessary to use rules for estimating the value an alley adds to the lot. When there is a lack of market data, it is believed land value units can be developed which will properly reflect alley influence. However, in those instances where an alley services only a portion of the lots in a block, it may be necessary to weigh the advantages and disadvantages of the same, one against the other. There are times when rules for measuring the added value of alley influence may be helpful.

In those exceptional cases where tracts of land or subdivided lots have their only frontage on and access by way of an alley, it is customary to place land value units on the alley frontage as though it were a narrow street. Land value is then calculated in the regular manner.

When an alley extends alongside a commercial lot, it is the practice in many tax jurisdictions to add one-half the width of the alley to the side of the lot and consider it as additional frontage on the street. For example, let's consider a lot having a frontage of 60 feet on the street; that is, 50 feet plus half the width of the 20-foot alley, or 10 feet. If the alley is in the rear of the lot, it is customary practice in those jurisdictions to add one-half of its width to the rear of the lot and apply the regular depth table unit that is being used in the area. This rule is believed to have had its inception in laws governing the vacation of streets or alleys by governmental bodies that provide that, where a street or alley is vacated for any reason, one-half of it accrues to each abutting property owner.

In some jurisdictions, additional value of alleys is computed on a percentage basis; usually 5% is added, sometimes more. In others, a flat percentage is added even after half of the width of the alley has been added to the depth of the lot.

IRREGULAR-SHAPED LOTS

If all lots in the county were in the form of a rectangle or square, the work of the appraiser would be partially simplified. There are many variations in lot shapes caused by irregularities of side, front, and rear street and alley lot lines and other factors. In estimating the value of an irregular-shaped lot,

its dimensions and shape must be taken into consideration and, in so far as possible, adjusted to a status which makes it comparable with other lots of standard shape.

There is no phase of the land appraisal process in which rules and formulas are as important as in that of computing the value of irregular-shaped lots. They are practical tools for use in achieving that degree of conformity to standards required for more ready comparison, and their use in this respect is practically mandatory if an equalization of land values is to be secured.

Before describing methods of adjusting irregular-shaped lots to conform to standard shapes and of making value computations, it is believed drawings and descriptions illustrating the more common geometric figures will be helpful.

1. SQUARE - Plane figure with four equal sides and four 90-degree angles.

2. RECTANGLE - A four-sided plane figure having both pairs of opposite sides parallel to each other and having four 90-degree angles.

3. PARALLELOGRAM - A four-sided plane figure having both pairs of opposite sides parallel to each other and having other than 90-degree angles.

4. TRAPEZOID - A four-sided plane figure having two parallel and two non-parallel sides.

5. QUADRILATERAL - A plane figure having no two sides parallel and no two sides at 90-degrees to each other.

6. TRIANGLE - A three-sided plane figure.

A. Right Angle - A triangle having a right angle.

B. Isosceles - A triangle having two sides, which are equal.

C. Equilateral - A triangle having all sides equal.

D. Obtuse - A triangle having an angle greater than 90 degrees but less than 180 degrees.

E. Acute - A triangle having all angles less than 90 degrees, as shown in examples A, B, and C.

The following grouping of regular and irregular-shaped lots has been prepared to illustrate those more frequently encountered and , also, methods of computing their value. Each lot in the group has been assigned a number. Separate sketches of these lots have also been made and are shown on the following pages. In each instance, the lot number corresponding with that shown on the group has been used.

The depth factor chart for a standard lot of 150-foot depth is shown in the Appendix, and a unit foot value, or price/front foot, of $60 has been used in all calculations.

TRIANGULAR LOTS

Compute the adjusted front foot value as a rectangular lot of identical frontage and depth.

For a triangle whose base is on the street, take 65% of the value of a whole rectangular lot of comparable frontage.

For a triangle whose apex is on the street, take 35% of the value of a whole rectangular lot of comparable frontage.

Caution should be exercised when evaluating odd-shaped lots, as the shape may prohibit practical use of the lot.

PARALLELOGRAM

To find the value of a parallelogram-shaped lot, scale the width at right angles to the sides. This will be the effective width of the lot. The effective depth is measured perpendicular to the street. Multiply the unit foot value by the depth factor to produce the adjusted unit foot value. Multiply the resulting adjusted unit foot value by the effective width of the lot.

REAR LOT

Find the depth factor for a depth equal to the distance from the front lot line to the street. Subtract it from the depth factor for a depth equal to the distance from the rear lot line to the street. Apply this remainder as the depth factor for the rear lot.

TRAPEZOIDAL LOT
(Sides at right angles to street)

Using a depth factor for the average depth of the two sides, proceed as with Lot 1.

IRREGULAR SHAPED LOT
(No sides parallel)

To find the value of an irregular lot, divide it into lots with parallel sides and into triangles and proceed as with Lots 2 and 7.

CURVED LOTS

To find the value of a lot with curved lines, rectify the curvatures with straight lines to produce equivalent rectangles, triangles, and trapezoids and use the applicable rules.

THROUGH LOTS

When lots extend through from one street to another, assign an arbitrary practical depth to each frontage and compute under the applicable rules.

TRAPEZOIDAL LOTS
(Parallel Front and Rear)

To find the value divide the lot into rectangular and triangular lots and proceed as with Lots 1 and 2.

Commercial site 1000 x 100 with acreage located at the rear. Acreage has current use applied.

Commercial site 200' x 200' priced on square foot basis with adjoining acreage which in the path of the area growth. Acreage is still under current use.

One-acre lot in a subdivision.

PLOTTAGE VALUE

An exclusive and hard-to-estimate type of land value is that which exists in excess of current market value or price after two or more parcels of real estate have been assembled under a single ownership and unit of utility. It is known as "plottage" or "assemblage" value. It represents an increment in value arising from a combination of small lots into a larger parcel of land that, in some instances, makes it more available for a greater variety of uses or more intensive development than previously, thus increasing its desirability and market ability.

In the acquisition of sufficient land for a substantial building project or expansion of an existing site, it is sometimes necessary to assemble small parcels from different owners, which usually entails extra costs, especially for key parcels and those purchased toward the end of the combining process. Prices paid for such parcels are usually well in excess of their independent value. For this reason, plottage value is sometimes referred to as "hold-up" or "nuisance" value.

Prior to evolvement of modern appraisal standards, it was generally assumed any assembled plat had a higher value than the total of the individual parcels comprising it, and that this increment in value could be computed accurately by adding to the aggregate value of the individual lots of percentage of such value, usually 10%. In the early 1900's, the courts of New York State defined plottage as "a percentage added to the aggregate value of two or more contiguous lots held in one ownership."

In later years, this practice was up-dated. Experience had taught that the use of a flat percentage was not a correct method of measuring plottage value and should not be accepted as a sound procedure, unless the assembled lots afforded a more profitable use than previously. With this provision, flat percentages continue to be used until more modern appraisal methods were devised. Percentages used ranged from 10% to as much as 25%, generally between 10% and 15%. Where the size of the combined parcel of land represented maximum utility, it was customary to use a higher percentage, usually not more than 15%. In other words, the practice was to increase the percentage with the degree of utility.

Any discussion relative to employment of modern appraisal methods in estimating plottage value should begin by redefining it. A lot is said to have plottage value when, by reason of its size, it is available for the most profitable use of its zone. It is a minor factor in the evaluation of land and one seldom encountered. However it is a factor to be reckoned with at times and one with which the assessor should be familiar.

The mere act of combining small areas of land into a large tract does not in itself make it more valuable. Added value results only when the assembled plot provides a higher and better utility for the land than previously existed.

Plottage value seldom, if ever, is a factor for consideration in the appraisal of single-family residential properties. It is sometimes encountered in residential areas when two or more lots have been combined for a garden-type or multi-story apartment project. It is most likely to exist in

industrial or retail business districts, especially where it has become necessary for an industry or business concern to expand. As already stated, the motivation for such expansion is, more often than not, a need for drive-in and/or parking facilities; but buildings which need enlargements sometimes create demands for additional land.

It has been noted that an arbitrary percentage added to the total value of the individual lots, even though predicated upon the degree of utility following assemblage is, by modern standards, considered unsound and unreliable. Such a method is never susceptible of proof and should not be used, nor is it believed possible to devise a rule or formula for use as a guide in estimating a proper allowance for plottage value.

Plottage value can only be gauged with reasonable accuracy by use of the value approaches previously described (Chapter 4), especially the income approach, by which the added utility and income value resulting from the assemblage of lots can be compared with the total value of the individual lots prior thereto. It is not recommended that the appraiser use any other method. To do so is skating on thin ice.

The market or sales-comparison approach is seldom helpful in estimating plottage value. In its proper application, all forced sales (where the purchaser is compelled to buy), and all distress sales (where the owner is forced to sell), are of little value in a market analysis, in that they do not represent open market transactions. At least a portion of all purchases made for purposes of assemblage would, more than likely, fall into the category of "forced" transactions and have to be discarded in the screening process.

CONCLUSION

In a mass appraisal program, a fairly accurate and equitable estimation of urban land values is contingent upon lot sizes and shapes which permit ready comparison, as well as utilization of the land for the purpose for which it is best suited. Standard unit foot values, as determined in the appraisal process, are predicated upon average or typical community and area conditions. A specific parcel of land must, therefore, conform reasonably well to the typical or average lot adopted by the appraiser as "standard" in estimating its unit foot value. If it does not, land computations are apt to be incorrect, inequitable, and invalid.

RURAL LAND

Rural land has been defined herein as the thinly populated, more remote, and outlying areas. The land is usually undeveloped or used for agricultural, mineral, recreational, or residential purposes. There may be a scattering of residential, commercial, and industrial areas, particularly at important road intersections and frontages on access roads serving interstate highways.

There was a time when rural land was purchased primarily by farmers for soil cultivation. In recent years, many other types of rural land buyers have entered the market, including investors, especially

those seeking tax shelters; professional and business men desiring country homes, generally referred to as "part-time" or "city farmers"; and purchases for future residential, commercial, or industrial developments. The alert appraiser, who recognizes this change in buying motives and is familiar with the principle of "ripening use" previously discussed, will be able to make proper sales analyses and place correct values on rural lands.

Rural land is desirable in direct proportion to its area, location, fertility, topography, and the quantity of natural resources, and is valuable to the extent it incorporates these and other physical attributes.

In the process of establishing value units and equalizing rural land values, the appraiser should take all factors into consideration. To illustrate, the area of a farm containing the most fertile and productive land in the county may be too small for profitable use in proportion to a large tract of the same soil type. Due to that economic factor, the per-acre value of the small farm may be less than that of the large one. On the other hand, it sometimes happens the selling price per acre of a small tract will exceed that of a large farm due to economic pressure or desire to enlarge holdings for more efficient operation.

Land used for agriculture is customarily divided into two broad classes; (1) land in farms, and (2) land not in farms. By "farm land" is meant that land devoted to or capable of agricultural use, whether row crops, allied tillable crops, improved (planted grasses), or native pasture.

BASIC UNITS OF VALUE

In rural areas, the appraiser is generally dealing with large land ownerships and the "acre" is the basic unit of land measurement. An acre contains 43,560 square feet, and an acre square is roughly 208 feet by 208 feet. In converting square feet into acreage, it is much simpler to multiply by .000023 than to divide by 43,560. For example, 50,500 square feet x .000023 = 1.16 acres. There may be instances where other units of land measures, such as the front foot or unit foot and linear foot addition may be used, either individually or in combination with per acre or arpent values.

TAX MAPS

The proper preparation and use of tax maps was fully described in Chapter 3, and a brief reference made to it in the first chapter of this part of the manual. However, at the risk of redundancy, some of the text is of sufficient importance for repetition.

Smaller scale maps are generally used more in rural than in urban or suburban areas. Land ownerships are large, there are not as many roads and streets or other physical features, and detail is not quite as important. Remote rural areas may be satisfactorily drawn on the 1" = 400'. If aerial photographs are available both aerials and maps will be the same scale. Wherever possible, maps should be scaled in accordance with the amount of detail required. For ease of handling and

continuity, the smaller the number of maps required to cover an area, the better; provided they are large enough to show essential details. This is a vital requirement.

Parcel numbers and ownership lines should be shown on all maps. In cases where one ownership appears on two or more maps, notes and cross references indicating this fact should be included.

Section, township, and range lines and other bases for legal descriptions should be shown. Zoning, if any, and important terrain features, including drainage canals, ridges, lakes, swamps, gullies, and others, should be noted on rural land maps. It is important that these maps be kept up to date.

SOIL-SURVEY MAPS

In appraising rural land, especially farmland, another type of map affords an indispensable aid to the appraiser; namely, the soil-survey maps, by which he/she is enabled to distinguish and classify the various soils to be found in his/her county.

A soil map, as defined by the U. S. Department of Agriculture, is one designed by soil scientists "to show the distribution of soil types or other soil mapping units in relation to other prominent physical and cultural features of the earth's surface. The units may be shown separately, or as soil associations named and defined in terms of taxonomic units. For example, Sharkey clay, 0 to 1 percent slope, is a mapping unit consisting of one soil type. Sharkey-Tunica clay, 0 to 1 percent slope, is a mapping unit made up of both Sharkey clay and Tunica clay in an intricate pattern too complex to separate at the map scale used. A Sharkey-Tunica association is a more general kind of mapping unit containing both soils in rather large bodies not separated from one another due to the objective of the survey.

A lot of research is essential in the preparation of soil survey maps. The salient characteristics of soils are first determined, after which they are classified into well-defined types, and other classifiable units. Boundaries between the various kinds of soils are established and plotted on maps. Final stages involve correlating all data and "predicting the adaptability of soils to various crops, grasses, and trees, their behavior and productivity under different management systems, and the yields of adapted crops under different sets of management practices."

From the foregoing definition and explanatory comments, two important facts emerge, to wit: (1) soil surveys and maps are grounded on all characteristics of soils influencing their use and management, and (2) interpretations are made for each of the various uses. In other words, to make the information that is shown on soil maps helpful, it is explained in a manner easily understood. These explanations are referred to as "interpretations."

There are two ways of interpreting soil maps; namely, (1) individual types of soil recorded on the map and (2) "the grouping of soils that behave similarly in response to management and treatment."

The Land Use Capability Classification (one of a number of interpretive groupings) is made primarily for agricultural purposes. The Natural Resources Conservation Service (NRCS) of the U.S. Department of Agriculture assigns each soil-mapping unit to a capability class, capability subclass, and capability unit. These ratings take into account ability of the land to respond under proper management and cultivation practices. It must be understood that the eight broad capability classes are based on the degree of limitation when used for common cultivated crops. They should not be construed as a measure of land value or productive potential. The lowest subdivision, the capability unit, provides the most homogeneous grouping in terms of value and productivity.

Many excellent soil-survey maps and publications interpreting them and describing the numerous soil types of Alabama are available to the appraiser for the asking or at nominal cost and can be found in the various assessment offices of the state. For the information of the appraiser who does not have these publications, a list of those considered most helpful is furnished below; also a brief description of each and the agency publishing it.

GENERAL SOIL MAPS OF COUNTIES

These are maps for each county at scales of one-fourth to one-half inch per mile. Each map contains six to twelve soil associations or groups of soils that occur on characteristic landscapes. General soil maps are available from local offices of the Soil Conservation Service.

SOIL SURVEY MANUAL

For the appraiser who wants more technical information on soil surveys, soil maps, what they comprise, how prepared, various soil groupings, and interpretations, a soil survey manual prepared by the U. S. Department of Agriculture can be obtained from the Superintendent of Documents, Washington, D. C. 20402. The title is "Soil Survey Manual" (Agricultural Handbook No. 18).

Voluminous data pertaining to soil classification, soil areas of Alabama; primary soil capability classes and subclasses for use in interpreting soil survey maps, are available to all appraisers of the state upon request, or at nominal cost. Sources of the data referred to have been listed above.

INVENTORY MAPS

An inventory map is one prepared by a professional appraiser or tax official to show everything of significance within the boundaries of a tract of rural land. It is more in use by fee appraisers than tax officials; but, when the assessor has the time and field personnel to prepare them, they provide valuable adjuncts in his work. Properly prepared, the assessor has a clear picture of what each tract contains. The maps are used in estimating the value of each tract, based on productivity of various areas comprising it, and other factors, and in making ready comparisons.

Each map is prepared during the personal inspection of the property. The field copy, made while walking or riding over it, can be used; but it is generally preferable to transfer the data to office maps. Neater and more usable maps are obtained in this manner.

An assessment inventory of this nature includes a description of physical resources, especially soils, topography, drainage, land use, buildings, and trees; also such hazards to productivity as poor drainage conditions, erosion, seasonal flooding, and overflow areas.

It is customary to denote various soil and other areas by broken or dotted lines and symbols, with differences in crop-producing ability of the soil classes indicated by a rating system in terms of best production (highest value), next-best, etc., such as I, II, III, IV. Any system employed will serve the purpose if understood by all personnel of the assessor's staff and the methods used are uniform and equitable. For future reference, each map should be initialed and dated by the person who prepared it.

AERIAL PHOTOGRAPHS

The need for a good set of up-to-date aerial photographs for rural land appraisal is evident. In many areas, complete aerial photo coverage is available through the U. S. Department of Agriculture. Stereoscopic aerial photos for checking elevation and grade are also available and can be put to good use in hilly areas.

Aerial photos are generally developed and printed to scale, some of the more common being 660' to 1" and 400' to 1". In general, the 600' to 1" is more satisfactory. It furnishes sufficient detail and is much less cumbersome than 400' to 1" photos. Glossy surfaces should be avoided. The texture should be such that section lines and other boundaries can be drawn with an ordinary colored pencil. Approximately 26" by 26" is a convenient size. It will facilitate mapping and fieldwork if they are cut in such a manner that entire sections are contained on the same photo.

The appraiser can make good use of aerial photographs for the following purposes:

(a)	Calculating acreage
(b)	Checking property ownership lines
(c)	Ascertaining land uses
(d)	Estimating the density and kind of timber growth
(e)	Locating and estimating the extent of low swamp or marsh areas.
(f)	Locating improvements not normally visible.

The above are only a few of the uses to which aerial photos may be put. Some inaccessible areas may have to be appraised solely on the basis of aerial photos covering the area. The art of interpreting them is one that can be learned only through experience. Comparing the way an area looks on the ground with the way it looks on an aerial photo is the best method of acquiring this art.

SALES DATA MAPS

Sales data should be "spotted" or correctly identified on maps according to property descriptions contained in recorded instruments. In posting sales information to the maps, boundaries of the various tracts involved should be outlined for future verification of selling prices regardless of whether the land is vacant or improved. In the posting process, it is preferable to use colored pencils so that certain facts, such as date of sale, can be indicated by different colors. For example, if all sales made in 1995 are shown in red and those in 1996 in blue, comparisons or adjustments for time differentials are more easily made. Other types of data can be shown in colors for ready reference. Sales are usually posted to the maps before contacts with property owners are made.

As a general rule, the market in rural land is difficult to interpret for several reasons. Fewer farms are sold than properties in urban areas. Sale prices of farms vary widely due to difference in soil characteristics; location, especially proximity to markets; accessibility; type of road; drainage; crop allotments (cotton, corn and peanuts); improvements; equipment, livestock, growing crops, and other factors.

When there is a scarcity of sales of comparable properties in a county, adjustments for differentials in time, soil types, area, location, and physical characteristics of the land become extremely important factors for skillful handling by the assessor.

When sales information is limited or scattered, with great need for proper adjustments, the assessor must be mindful of the fact that variations in the value of farms as such are due primarily to differences in soil productivity and ability to produce income. It sometimes happens that the soils on one farm are far more productive than those on the farm directly across the road.

In comparing soil types and income potentials of various farms in the county, it is necessary to distinguish between income variations, which result from soil differences, and those attributable to soil management.

Where the real estate market in a county is active, sales data for two or three years preceding the assessment date may be sufficient for use in establishing values. On the other hand, if the market is sluggish, with sales few and far between, it may be necessary to go back five or more years for needed data. In that event, adjustments for time differentials are extremely important.

The consideration and date of sale are of prime importance. Other pertinent information should be shown, such as approximate value of any buildings and other improvements, equipment, livestock, and growing crops when included in the sale price. Where any improvements, farm equipment, livestock, and growing crops are a part of the consideration, they should be deducted from the total price paid for the property in order to obtain a fair estimate of the "fair and reasonable market value" of the land - a residual process previously explained. It is important to ascertain whether or not the sale under consideration was an "arms-length" transaction. Some sales can be misleading, as pointed out in Part IV, and should be disregarded. Importance of verifying the consideration, terms, and

conditions of the sale with the grantor, grantee, escrow agent, or broker who handled the transaction has already been emphasized. After all essential data have been assembled and recorded on the maps; the assessor is in a position to establish basic values for the various classes of rural land in his county.

In the case of land producing such field crops as cotton, corn, and peanuts, crop allotments can be important and should be taken into account in the sales analyses and determination of basic land units. Crop allotments often present problems to the appraiser. When obtainable, actual income data on farms, both with and without crop allotments, and a comparison of the same offers what is perhaps the best approach. One practical solution results from the opinions of successful farmers as to how much, in terms of percentages, they feel an allotment adds to the value of land.
In some tax jurisdictions throughout the country, it has been the practice of appraisers to add some arbitrary percentage (usually 5 to 10%) to the value of the land for proximity to market or frontage on a paved road, and to deduct a like amount when the land fronted on an exceptionally poor road or was a long distance from the nearest town or market. The same holds true in areas where there are crop allotments, but increment percentages used for land enjoying the benefits of allotments are usually higher than those applied to road, location and other factors. This method of increment increases for location on a paved road, proximity to market, or crop allotment is unsound and impractical unless the percentages used can be substantiated by differentials in value derived from income analyses and/or actual sales of comparable properties. For example, if farms of a certain type are selling at an average price of $600 per acre and farms of the same character on a good paved road are selling at average prices of $630 per acre, the added value for the road would be 5%. Those best informed on farm values are prone to express such factors in terms of percentages, but they are based on their experience in the area of their operation and not arbitrary figures plucked out of the air. The proper procedure is to raise the value per acre to properly reflect any benefits, and lower unit values to indicate reverse conditions. When sufficient market data are available, the comparative land value units will be indicated. In other words, when possible, the appraiser should look to the market place in fixing land value units and establishing differentials.

In many areas, landowners have prepared “Farm Conservation Plans” with assistance from The Natural Resources Conservation Service. A plan of this nature is one in which land capability units of a specific farm have been assigned according to soil type, slope, drainage, and other factors. All of these farm plans are confidential; but, where a farm has been sold and it is considered a "pilot sale," it is believed the appraiser will be able to obtain the facts from the owner or purchaser after explaining his reason for wanting the data.

Completed countywide soil surveys are one of the most useful tools available to the appraiser for land appraisal. In using these soil surveys, a basic rating is applied to each soil-mapping unit, and the acreage on each farm is measured. This serves as a starting point for adjustment due to buildings, allotments, roads, etc. Once the ratings for each soil are assigned, the basic rating for each farm is primarily a clerical job.

The services of a competent soil technician - to lay down guidelines for various soil types and prepare broad groupings of soils in the county - will be invaluable to the appraiser. It is not likely the county will be able to afford the services of a full-time technician in this field, but it might be possible to employ a retired agricultural agent or other soil specialist on a part-time consultant basis. After the groundwork of classifying and grouping the basic soils of the county and establishing

typical land value units for each class has been completed, the subsequent tasks of land classification and subclassification and pricing can be done by a person of practical experience and knowledge of local conditions. If the appraiser is familiar with farming operations and can record the data and conclusions in neat, systematic notes, a satisfactory appraisal of farms and rural land can be produced.

It should be stressed that simplicity of soil classification is of utmost importance. This is necessary, even at the expense of some accuracy. The system must not be unduly time consuming, must be within the capability of available personnel, and must be within the comprehension of the average taxpayer.

Rural land should be broken down into three classes:

A.	Row Crop
B.	Pasture land
C.	Timberland

These classes will be subdivided into three sub-classes as follows:

A-1	Above Average	B-1	Above Average	C-1	Above Average
A-2	Average	B-2	Average	C-2	Average
A-3	Below Average	B-3	Below Average	C-3	Below Average

EXAMPLES OF SALES ANALYSES

The following examples are hypothetical, and the results derived therefrom are in no sense to be construed as values for use by appraisers in any part of the state. However, they are based on factual information, and methods outlined represent good appraisal practice.

EXAMPLE 1

A 250-acre tract was sold in 1995 for $139,600. No equipment, livestock, or growing crops was included in the transfer. A livable tenant house was located on the property. It is vacant at present, and the new owner says he does not need it and did not regard it as having any value when he purchased the tract.

A personal inspection and careful interpretation of the aerial photograph show 60 acres of uncleared, swampy creek bottom and 190 acres of Class "B" land. The buyer says he was primarily interested in the farmland but, in his opinion, $110 an acre is the approximate fair value of the creek bottom.

Inquiries among several landowners verify this opinion of $110 per acre as a reasonable value. There was no merchantable timber involved. The buyer states he bought the land primarily for the production of soybeans. The land is a little too heavy for cotton and has no allotment.

Purchase price	$139,600
Less 60 acres creek bottom @ $110	6,600
Price of 190 acres "B" land	$133,000

Value of "B" land per acre ($133,000 / 190 acres) = $700

EXAMPLE 2

This represents a sale of 300 acres for $110,000, which an experienced local soil technician who was consulted classifies as 200 acres of Class "C" land and 100 acres of cypress swamp.

An investigation shows that: (1) Buildings are of nominal value only; (2) the transaction was at "arm's length" between an informed seller and an informed buyer; (3) there was no pressing need for cash on the part of the seller and no special need for the particular property on the part of the buyer.

The swamp has no merchantable timber and, from best evidence available, is assigned a value of $100 an acre.

Purchase Price - 300 acres	$110,000
Less 100 acres Cypress Swamp @ $100	10,000
Value 200 acres Class "C" land	$100,000

Value per acre of Class "C" land ($100,000 / 200) = $500

This has established a value of approximately $500 per acre for Class "C" land.

EXAMPLE 3

The selling price was $306,000. The property was conveyed in 1995, but farm values had not changed materially in the two-year interim. Inquiries revealed that it was a bona fide transaction; that the improvements had a value of approximately $10,100 and that neither growing crops, livestock, nor farm machinery and equipment were included in the transfer. According to reliable information, the farm contained 200 acres of Class "C" land, and 150 acres of cypress swamp.

The farm is located on a good paved road. In the opinion of knowledgeable buyers and sellers, and others informed on farmland values in the area, an increment of approximately 5% was attributable to this factor. The property is within eight miles of a city with a population of 30,000. There does not appear to be any demand for land in the vicinity for residential or industrial development, but proximity to the city gives it added value. The purchaser was interviewed, also a representative of the insurance company which financed the transaction, a broker specializing in rural property, and others well informed on values. It was the consensus of those consulted that location near the city market added another 10% to the value of the subject farm.

In order to convert this sale to one comparable with those previously described, adjustments had to be made for the factors of "good paved road" and "proximity to market," as follows:

$306,000 x 85% (100% less 15%, 5% for paved road, plus 10% for location) =	$260,100
Less estimated value of buildings	10,100
	$250,000
Less 150 acres of Class "C" land @ $500, or	75,000
	$175,000
Less 150 acres of Cypress Swamp @ $100, or	15,000
Residual value of 200 acres Class "A" land	$160,000

This indicates a value of $800 per acre for Class "A" land ($160,000 / 200 acres). However, a per acre value of $800 is misleading because of the cotton allotment covering 85 of the 200 acres.

The same informed parties stated as their opinion that 30% should be added for this allotment factor.

Effective acreage of land with cotton allotment - 85 x 130%, or	110.5 acres
Land without allotment	115.0 acres
Total effective acreage	225.5 acres
Per acre value with no crop allotment ($160,000 / 225.50 acres) =	$709.53
Per acre value with allotment ($709.53 x 130%) =	$922.39
Value of 115 acres with no allotment	$ 81,596
Value of 85 acres with allotment	$ 78,403
Total value 200 acres Class "A" land	$159,999
(In even amount)	$160,000

While the last step was unnecessary, it is shown to prove the accuracy of both the process and calculations.

We have derived an estimated value per acre for Class "A" land with no allotment of $709.53 and for the same land with an allotment of $922.39.

These values are rounded to $710 and $920.

From these sales, we have derived the following estimates of per acre value:

Class "A" with cotton allotment	$920.00
Class "A" with no cotton allotment	$710.00
Class "B"	$700.00
Class "C"	$500.00

Creek Bottom	$110.00
Cypress Swamp	$100.00

The appraiser will not be able to use values derived from these sales as exact figures. They will have to be compared with results from sales in his/her county and further refined before being used. They are used solely for the purpose of illustrating methods of sales analyses and establishing land value units.

Before an appraiser decides that collecting and analyzing sales data is too time consuming and laborious, he/she should keep in mind the fact that good will and other valuable information will be obtained in the process. He/she should also consider that a dissatisfied taxpayer may contest assessments and the courts are apt to rule in favor of the litigant who can present well organized and convincing market data.

As the public demands more and more services and the tax burden increases, the taxpayer is becoming more insistent on knowing the basis on which values are formulated. If the taxpayer sees that an intelligent effort is being made to arrive at correct values and to equalize them, he will be much more amenable.

Representatives of local agricultural agencies can usually furnish average yields per acre, but care must be exercised in their use. Because Soil A produced 20% more than Soil B does not mean it is worth 20% more. Production costs will be as great, possibly greater, on Soil B; and, consequently, from an income standpoint, 20% may be too conservative an added value.

Advice from the local banker and Federal Land Bank officials is invaluable. They will often hesitate to name a definite per acre value, but they will give average loan values for various classes of property.

Insurance companies are prominent in the farm loan field, and their representatives should be contacted.

Successful real estate brokers who specialize in rural property will usually furnish sales information and express an opinion as to whether proposed values are too low or too high.

There need be no hesitation on the part of the tax official in approaching knowledgeable people in his search for information. Responsible citizens realize the importance of his work and, in almost all cases, will give him full cooperation.

There are various factors that influence market data even in an "arm's length" transaction.

Attention has been called to location on a good paved road or proximity to market as enhancing factors of rural property, especially if the farm produces bulky, perishable products such as milk or vegetables.

With increased mechanization and the high cost of farm equipment, it is ever more necessary to spread the cost of this equipment over more bushels or bales of product. There is a limit to what an acre of land can be made to produce, and allotments for some products are becoming smaller instead of larger. Consequently, the farmer will often pay more per acre for an adjoining 40 acres than he could economically pay for a 400-acre farm.

The classification of rural land is a matter for determination by each appraiser, but correlation between adjoining counties is advisable. What is generally regarded as a good soil in one area, might be considered poor in the Tennessee Valley.

FOREST LAND

Placing a value on land suitable primarily for the growth of forest products must also remain a local problem. The timber itself is subject to a severance tax and is exempt from ad valorem taxation, but the appraiser has the responsibility of placing values on the land. In this phase of work, there are several important factors to be considered.

The potential productivity of each type of soil for wood crops determines its classification. In other words, soils suited primarily for forest products are classified according to their potential productivity under a prescribed kind of operation. A method used by foresters in rating this soil quality is known as "site index," which means the average height of the dominant trees in a stand at an age of 50 years, except 30 years for cottonwood and black willow, and 35 years for sycamore.

As in the case of farmland, it is not necessary for the appraiser to establish a complicated system of classification that is too-time consuming and beyond the capability of available personnel. For the sake of simplicity, it is recommended that forest soils for each of the legally prescribed classifications be broken down into not more than three broad groups: Good, Medium, and Poor, for example. Very possibly one group will suffice for Cypress. For pineland, a breakdown into flatwoods and upland soils may be sufficient. The advice of a county forester and soil conservationists will be of great value.

Acreage of various classifications can be calculated by the use of land scale and aerial photographs, subsequently explained.

An average per acre value for each soil classification should be established for the entire county.

If there is a noted difference in the market value of two or more tracts of woodland due to varying distances from the market, it may be necessary to make breaks in land value units at a township or range line, river, or main highway. However, exact points of demarcation are extremely difficult to establish and, if at all possible, such breaks should be avoided. Who can assert with finality that land south of a township line is worth $200 per acre and that land immediately north of it is worth $300

per acre? Here again, the tax official must rely upon income and market comparisons for any supportable value differentials and break points.

In appraising forestland, the condition of roads is not as important as in the case of land producing perishable crops, such as vegetables or milk. However, the appraiser may want to recognize the difference by some small reduction or addition in per acre value, as reflected by the market. There will be areas where natural physical obstacles make harvesting difficult, such as a pine island surrounded by cypress swamp. Such areas are entitled to reductions in value.

The importance of assembling and analyzing sales data as a basic factor in establishing land value units has been stressed throughout the manual. It is a crucial step in estimating the "fair and reasonable market value" of forestland, even though there are fewer sales in this category than that of farm land. Companies, which are developing the land on a long-term basis, own large wooded areas, and these large tracts are seldom placed on the market. Guidelines for the evaluation of woodland are not apt to be as pronounced as in the case of farmland, where acreage is smaller and more sales data are available. However, a thorough search will usually unearth sufficient sales data for use in forming value opinions.

It has been observed that, under the laws of Alabama, forest products are exempt from ad valorem taxation. Therefore, in analyzing available sales, it is necessary to deduct the estimated value of wood crops from the sale price in each instance. The estimated value of standing timber or other wood crops should be obtained from best-informed sources.

INCOME APPROACH

The income approach has a limited value in the appraisal of farmland. In the case of commercial property there is generally a much steadier income, often assured over a period of years by leases with financially sound lessees.

In appraising farmland, wide fluctuations in the price of many farm products, and wide variations in yield caused by insect pests, plant diseases, and vagaries of the weather often exist. Management plays an important part in yield and per acre costs. These fluctuations make it extremely difficult to formulate an average income per acre.

In the case of rural land rentals, it is possible to use the income approach to some advantage.

In general, all land suitable for some specific crop will not be rented every year. It will be necessary for the appraiser to estimate the percentage that will be idle in the average year and use this factor as a vacancy allowance.

In order to estimate the proper interest rate, the appraiser should contact lessors and local bankers. For the purpose of this problem, we assume a 10% vacancy and expense factor and an 8% interest rate.

Average yearly rental per acre	$30.00
Less 10% vacancy and expense factor	3.00
Estimated net annual income	$27.00

Estimate value per acre by income approach $27.00 / 8% = $337.50

In this instance there are two variables subject to wide differences of opinion, (1) the vacancy rate will fluctuate with the market; and (2) a slight variation in the interest rate causes to wide a variation in the estimated value per acre.

$27.00 / 7% = $385.71
$27.00 / 8% = $337.50
$27.00 / 9% = $300.00

CONCLUDING COMMENTS

The actual classification will be much easier in counties that have published detailed soil surveys. In other counties general soil maps at a scale of one-fourth to one-half inch per mile are helpful as a general guideline.

Detailed soil surveys of scattered tracts may be examined at offices of the Natural Resources Conservation Service and are useful as a sample of soil conditions represented by areas on the general soil map.

Subordinate personnel who are to prepare land classifications should have a part in establishing per acre rates or land value units. They will have a clearer conception of the classification and will have better morale if they feel they have more responsibility than that involved in a routine job.

The land appraiser will quickly learn to use the aerial photographs and distinguish swamps, pineland, hardwood, roads, and various natural features. The problem lies not in incorrect interpretation of the aerials, but in placing too much reliance on them and not viewing the property. Even recently flown aerials cannot be used literally. New roads are built, orchards planted, farmland abandoned, so that a periodic personal check is necessary.

Overlaying the negative of the aerial photograph with the appropriate Mylar, a blue line map can be produced that contains a picture of an area with parcel lines. By making a transparency of the appropriate page from the soil survey manual for the county, the soil types can be projected upon the blue line map and then traced to produce a permanent record for that locator. While doing this can be time consuming, these maps for the individual locators become invaluable tools for the appraiser

in valuing the different land parcels within the county. These maps not only show the soil types but also the roads, swamps, types of crops (timber, row, pasture or combination) and any improvements that were there on the photo date. Using a planimeter, the size of an area can be easily determined, thus making it possible to calculate the acreage for a particular portion of land.

As previously stated, large-scale soil maps are of great value if available. They will fit in with terrain and the use to which the individual landowner is putting his/her land.

The acreage of each classification is entered on each parcel on the appraisal map, for instance:

17 - Pecans - 500/A
118 - Farm Land B - 900/A
23 - Swamp - 100/A
12 - Pine Land - 500/A

There may also be a note as to accessibility of location.

Poor dirt road - less 5%
or
Paved road - plus 10%

Office personnel transfer this information to permanent record cards in the tax official's office.

PONDS

Ponds can serve a variety of purposes, including water for livestock, irrigation, fish production, recreation and landscape improvement.

The two major types built in Alabama are watershed and levee ponds. The watershed pond is constructed by building an embankment or dam across a stream or watercourse where the natural water flow or run off is sufficient to maintain a certain level of water. A levee pond on the other hand is constructed by excavating the earth, usually on level land, and building a levee on each side to retain the water.

The following conclusions about ponds used for fish culture can be made and also applied to other ponds:

(1) No typical cost fits all ponds
(2) Cost and value are not necessarily equal
(3) Value should be based on acres of surface area
(4) Increased depth over 4 - feet does not increase the value of a pond for fish culture
(5) Construction costs per surface acre decreases as pond size increases

The following values have been determined appropriate for all ponds:

WATERSHED PONDS

ACREAGE	ONE SIDE	TWO SIDES	THREE SIDES
1-5	$2100/Acre		
6-10	$1400/Acre		
11-15	$1200/Acre	$1500/Acre	$1800/Acre
16-20	$1000/Acre	$1200/Acre	$1500/Acre
21-25	$1000/Acre	$1100/Acre	$1300/Acre
26-30	$900/Acre	$1000/Acre	

LEVEE PONDS

ACREAGE	
1-15	$1850/Acre
16-20	$1100/Acre
21-25	$950/Acre

Pond values should be added as a land improvement and is not subject to depreciation.

Pond values include earthwork and basic drainage only. Any additional buildings, concrete paving, fencing or other items should be valued separately.