

2017

REVALUATION



CHATHAM COUNTY
NORTH CAROLINA



SCHEDULE OF VALUES

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CHATHAM COUNTY SCHEDULE OF VALUES

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COMPONENTS OF A REAPPRAISAL

To accomplish the task of valuing all parcels within a county as of the January 1 revaluation date, the methodology of mass appraisal rather than the methodology of single-property appraisals must be utilized. Mass appraisal is the systematic appraisal of groups of properties as neighborhoods. This is accomplished by using standardized procedures and statistical testing. In a mass appraisal system, the assessor must make valuation judgments about groups of properties rather than single properties. The assessor must be able to develop, support and explain standardized adjustments in a valuation model among use classes, construction types, neighborhoods and other property groups. The guide used for this is the uniform schedule of values. The schedule of values is made up of schedules, standards, rules, tables and other factors used to apply the correct value to parcels. The schedule of values serves as the county's mass appraisal model and is implemented by means of a computer assisted mass appraisal system (CAMA). Incorporated in the schedule, may be building cost figures derived from national data that have been adjusted to reflect local costs, local cost studies, qualifying arms-length sales, and income and expense formulas. The schedule of values sets forth values for appropriate unit of measurement for use in appraising land and buildings. For example, land may be valued by a set amount per square foot, lot, acre, or homesite, depending on the highest and best use, while a dwelling is typically value using an established amount per square foot. The land unit per appropriate unit of measurement also will vary depending on the neighborhood in which the land is situated. Factors that warrant adjustments are also set forth in the schedule of values for various types of property. The schedule typically authorizes adjustments to land value based on factors such as homesite size, excess acreage, road frontage, topography, zoning, the present of easements and other factors. A county's schedule also typically prescribes ranges of characteristics and corresponding percentage adjustments for recognized factors.

Mass appraisal for ad valorem purposes encumbers many of the same principles as an independent fee, single-property appraisal. Mass appraisal techniques, however, emphasize valuation modules (expressed as equations, tables and schedules), standards of practice, and statistical quality control. A reassessment program consists of these subsystems:

1. A data management system
2. A sales analysis system
3. A valuation system
4. An administrative system

These subsystems are independent of each other. For example, the valuation systems uses information maintained in the sales analysis and data management systems and produces output (valuations) required by the administrative system in the production of tax bills.

DATA MANAGEMANT SYSTEM

The data management system has components for collection, entry, editing, organization, conversion, storage, and security of property characteristics and ownership. Quality control of

this system is very importance because the accuracy of the values determined depends on the reliability of the data from which they are generated. In addition, data collection, conversion, and maintenance are the most expensive aspect of any reappraisal program. Special care must be given to the thought and planning required of managing logic to minimize cost.

Data maintenance is the protocols for creating new parcels, capturing and valuing new construction, and making changes to the current property database. The maintenance protocol consists of three components:

1. County land records system: the daily creation of new parcels from the recording of “splits” (dividing of an existing parcel), combining existing parcels, and the recording of new subdivision plats feeds the second component.
2. Permits and inspections: as the appraisal staff receives notice of new permits and inspections, property record cards are pulled and new data is collected daily. Staff receives this information and monitors the construction progress and makes determinations of the percentage of construction competed as of January 1 each calendar year.
3. Periodic re-inspection of all properties: routine field visits are supplemented with information obtained from the latest Orthophotography and provided by property owners as part of the annual listing abstracts, and requests from taxpayers for review or appeal.

SALES ANALYSIS SYSTEM

The sales system has components for sales data collection, sales screening and processing, ratio studies, and sales reporting. Assessment/sales ratio studies are the primary tool for measuring mass appraisal performance. They are invaluable for monitoring appraisal results, identifying reappraisal priorities, adjusting valuations to the market, and assisting the administrative system in planning and scheduling.

Ratio studies and sales reports draw on values produced by the valuation system and on property characteristics maintained in the data management

VALUATION SYSTEM

The valuation system (CAMA) consists of mass appraisal applications of the three approaches to value and/or allows for various adjustments that recognize specific aspects of each approach. The three approaches are:

1. The Cost Approach: requires maintenance and application of computerized cost schedules and equations, depreciation schedules, and indexing factors. This data comes from contractors, building material suppliers, etc.

- 2. Sales Comparison Approach: applications include multiple regression analysis and model building for automated comparable sales analysis.
- 3. The Income Approach: will require income multipliers and overall rates. The information to generate this comes from rental, leasing, sales etc. data provided by owners and tenants.

The optimum results of the valuation system will be to consider all three approaches to value, as appropriate to property type, and determine which method(s) produces the best results for the final appraisal. Properly executed, any of the three approaches to value will yield creditable results, however the sales comparison and income approaches are highly dependent on available data. Of the three approaches only the cost approach can be uniformly applied with limited data.

The current economy has affected the number of arm's length sales occurring in the market. A general county-wide reappraisal depends on data being available from a wide variety of sources in order to properly apply each of the three approaches to value. Even when an abundance of relevant data is available for applying the sales comparison approach and the income approach that data may also be utilized in refining the cost approach. In the absence of relevant data prior to the final determination of reappraisal values, the cost approach becomes the more reliable approach for all property types. Below is a comparison of the three approaches to value and when best to apply them. (1)

<u>RESIDENTIAL</u>	<u>COMMERICAL</u>	<u>INDUSTRIAL/ SPECIAL PURPOSE</u>
1. Sales Comparison	1. Income	1. Cost
2. Cost	2. Cost	2. Sales Comparison
3. Income	3. Sales Comparison	3. Income

1 Information provided from IAAO One-Day Forum 960.

THE ADMINISTRATIVE SYSTEM

The administrative system is comprised of a variety of functions and activities, each of which requires information from sales analysis, valuation, or data management systems and produces products used by the administrative system.

IN-HOUSE REAPPRAISAL

An in-house reappraisal is a major effort requiring careful preparation, the support of county management and the Board of County Commissioners, adequate time, and sufficient funds. In preparing a schedule and reappraisal the assessor's office should include the relationship between the daily operations of the assessor's office and the reappraisal program. Adequate time to cover probable delays and contingencies to deal with unforeseen problems must be taken into consideration. Even though the reappraisal process should be viewed as separate from daily operations, existing staff, duties, responsibilities, and priorities must be modified, and additional staff may be required.

SUMMARY

General reappraisals of real property are required by statutory authority to be performed on an octennial plan (eight-year cycle). Many counties adopt a shorter cycle via a resolution by their respective County Board of Commissioners. The current trend in North Carolina is a four-year cycle for reappraisal with counties to hire and train the staff in order to perform an "In-House" reappraisal as opposed to "contracted" from outside the county lines.

As understood by the assessor's office an effective reappraisal requires careful planning, a realistic analysis of the present state of the assessment records and values, and the resources needed to conduct the appraisal. As such, reappraisals are a costly, highly visible and politically sensitive undertaking. However, since the real property staff in the assessor's office understands its own resources and the technical requirements of the task, they are committed to conducting the most fair and equitable reappraisal possible. The success of this endeavor depends on the leadership of the assessor's office, an informed public awareness and committed management support.

STATUTORY REQUIREMENTS

For an assessor to undertake his responsibilities and duties properly, he must be familiar with the legal framework in which to perform his function. The legal framework sets the guidance and rules to follow for a reappraisal. Some general statutes, but not all are included in this section. Others will be included throughout this schedule as applicable.

GS 105-286. Time for general reappraisal of Real Property.

(a) Octennial Cycle. – Each county must reappraise all real property in accordance with the provisions of G.S. 105-283 and G.S. 105-317 as of January 1 of the year set out in the following schedule and every eighth year thereafter, unless the county is required to advance the date under subdivision (2) of this section or chooses to advance the date under subdivision (3) of this section.

(1) Schedule of Initial Reappraisals. –

Division Eight – 1979: ---Chatham NCGS 105-286

(2) Mandatory Advancement. – A county whose population is 75,000 or greater according to the most recent annual population estimates certified to the Secretary by the State Budget Officer must conduct a reappraisal of real property when the county's sales assessment ratio determined under G.S. 105-289(h) is less than .85 or greater than 1.15, as indicated on the notice the county receives under G.S. 105-284. A reappraisal required under this subdivision must become effective no later than January 1 of the earlier of the following years:

- a. The third year following the year the county received the notice.
- b. The eighth year following the year of the county's last reappraisal.

(3) Optional Advancement – A county may conduct a reappraisal of real property earlier than required by subdivision (1) or (2) of this subsection if the board of county commissioners adopts a resolution providing for advancement of the reappraisal. The resolution must designate the effective date of the advanced reappraisal and may designate a new reappraisal cycle that is more frequent than the octennial cycle set in subdivision (1) of the subsection. The board of county commissioners must promptly forward a copy of the resolution adopted under this subdivision to the Department of Revenue. A more frequent reappraisal cycle designated in a resolution adopted under this subdivision continues in effect after a mandatory reappraisal required under subdivision (2) of this subsection unless the board of county commissioners adopts another resolution that designates a different date for the county's next reappraisal.

Note: Under the provisions of **GS 105-286 (a) (3)** for 2013 the Chatham County Board of Commissioners adopted a resolution to advance the reappraisal date to January 1, 2017 and continue on a four-year reappraisal cycle from this date.

G S 105-273(13) Definitions

Real property, real estate, or land. – Any of the following:

- a. The land itself.
- b. Buildings, structures, improvements, or permanent fixtures on land.
- c. All rights and privileges belonging or in any way appertaining to the property.
- d. A manufactured home as defined in G.S. 143-143.9(6), unless it is considered tangible personal property for failure to meet all of the following requirements:
 1. It is a residential structure.
 2. It has the moving hitch, wheels and axles removed, land owned by the owner of the manufactured home or on land in which the owner of the manufactured home has a leasehold interest pursuant to a lease with a primary term of at least 20 years and the lease expressly provides for the disposition of the manufactured home upon termination of the lease.

G S 105-296. Powers and duties of assessor.

(b) Within budgeted appropriations, he shall employ listers, appraisers, and clerical assistants necessary to carry out the listing, appraisal, assessing, and billing functions required by law. The assessor may allocate responsibility among such employees by territory, by subject matter, or on any other reasonable basis. Each person employed by the assessor as a real property appraiser or personal property appraiser shall during the first year of employment and at least every other year thereafter attend a course of instruction in his area of work. At the end of the first year of their employment, such persons shall also achieve a passing score on a comprehensive examination in property tax administration conducted by the Department of Revenue.

G S 105-299. Employment of experts.

The board of county commissioners may employ appraisal firms, mapping firms or other persons or firms having expertise in one or more of the duties of the assessor to assist him or her in the performance of such duties. The county may make available to such persons any information it has that will facilitate the performance of a contract entered into pursuant to this section. Persons receiving such information shall be subject to the provisions of G.S. 105-289(e) and G.S. 105-259 regarding the use and disclosure of information provided to them by the county. Any person employed by an appraisal firm whose duties include the appraisal of property for the county shall be required to demonstrate that he or she is qualified to carry out such duties by achieving a passing grade on a comprehensive examination in the appraisal of property administered by the Department of Revenue. In the employment of such firms, primary consideration shall be given to the firms registered with the Department of Revenue pursuant to the provisions of G.S. 105-289(i). A copy of the specifications to be submitted to potential bidders and a copy of the proposed contract may be sent by the board to the Department of Revenue for review before the invitation or acceptance of any bids. Contracts for the employment of such firms or persons shall be deemed to be contracts for personal services and shall not be subject to the provisions of Article 8, Chapter 143, of the General Statutes.

(1939, c. 310, s. 408; 1971, c. 806, s. 1; 1973, c. 476, s. 193; 1975, c. 508, s. 2; 1983, c. 813, s. 4; 1985, ARTICLE 19.

G S 105-317. Appraisal of real property; adoption of schedules, standards, and rules.

(a) Whenever any real property is appraised it shall be the duty of the persons making appraisals:

(1) In determining the true value of land, to consider as to each tract, parcel, or lot separately listed at least its advantages and disadvantages as to location; zoning; quality of soil; waterpower; water privileges; dedication as a nature preserve; conservation or preservation agreements; mineral, quarry, or other valuable deposits; fertility; adaptability for agricultural, timber-producing, commercial, industrial, or other uses; past income; probable future income; and any other factors that may affect its value except growing crops of a seasonal or annual nature.

(2) In determining the true value of a building or other improvement, to consider at least its location; type of construction; age; replacement cost; cost; adaptability for residence, commercial, industrial, or other uses; past income; probable future income; and any other factors that may affect its value.

(3) To appraise partially completed buildings in accordance with the degree of completion on January 1.

(b) In preparation for each revaluation of real property required by G.S. 105-286, it shall be the duty of the assessor to see that:

(1) Uniform schedules of values, standards, and rules to be used in appraising real property at its true value and at its present-use value are prepared and are sufficiently detailed to enable those making appraisals to adhere to them in appraising real property.

(2) Repealed by Session Laws 1981, c. 678, s. 1.

(3) A separate property record be prepared for each tract, parcel, lot, or group of contiguous lots, which record shall show the information required for compliance with the provisions of G.S. 105-309 insofar as they deal with real property, as well as that required by this section. (The purpose of this subdivision is to require that individual property records be maintained in sufficient detail to enable property owners to ascertain the method, rules, and standards of value by which property is appraised.)

(4) The property characteristics considered in appraising each lot, parcel, tract, building, structure and improvement, in accordance with the schedules of values, standards, and rules, be accurately recorded on the appropriate property record.

(5) Upon the request of the owner, the board of equalization and review, or the board of county commissioners, any particular lot, parcel, tract, building, structure or improvement be actually visited and observed to verify the accuracy of property characteristics on record for that property.

(6) Each lot, parcel, tract, building, structure and improvement be separately appraised by a competent appraiser, either one appointed under the provisions of G.S. 105-296 or one employed under the provisions of G.S. 105-299.

(7) Notice is given in writing to the owner that he is entitled to have an actual visitation and observation of his property to verify the accuracy of property characteristics on record for that property.

(c) The values, standards, and rules required by subdivision (b) (1) shall be reviewed and approved by the board of county commissioners before January 1 of the year they are applied. The board of county commissioners may approve the schedules of values, standards, and rules to be used in appraising real property at its true value and at its present-use value either separately or simultaneously. Notice of the receipt and adoption by the board of county commissioners of either or both the true value and present-use value schedules, standards, and rules, and notice of a property owner's right to comment on and contest the schedules, standards, and rules shall be given as follows:

(1) The assessor shall submit the proposed schedules, standards, and rules to the board of county commissioners not less than 21 days before the meeting at which they will be considered by the board. On the same day that they are submitted to the board for its consideration, the assessor shall file a copy of the proposed schedules, standards, and rules in his office where they shall remain available for public inspection.

(2) Upon receipt of the proposed schedules, standards, and rules, the board of commissioners shall publish a statement in a newspaper having general circulation in the county stating:

a. That the proposed schedules, standards, and rules to be used in appraising real property in the county have been submitted to the board of county commissioners and are available for public inspection in the assessor's office; and

b. The time and place of a public hearing on the proposed schedules, standards, and rules that shall be held by the board of county

commissioners at least seven days before adopting the final schedules, standards, and rules.

(3) When the board of county commissioners approves the final schedules, standards, and rules, it shall issue an order adopting them. Notice of this order shall be published once a week for four successive weeks in a newspaper having general circulation in the county, with the last publication being not less than seven days before the last day for challenging the validity of the schedules, standards, and rules by appeal to the Property Tax Commission. The notice shall state:

a. That the schedules, standards, and rules to be used in the next scheduled reappraisal of real property in the county have been adopted and are open to examination in the office of the assessor; and

b. That a property owner who asserts that the schedules, standards, and rules are invalid may except to the order and appeal there from to the Property Tax Commission within 30 days of the date when the notice of the order adopting the schedules, standards, and rules was first published.

(d) Before the board of county commissioners adopts the schedules of values, standards, and rules, the assessor may collect data needed to apply the schedules, standards, and rules to each parcel in the county.

§ 105-283. Uniform appraisal standards.

All property, real and personal, shall as far as practicable be appraised or valued at its true value in money. When used in this Subchapter, the words "true value" shall be interpreted as meaning market value, that is, the price estimated in terms of money at which the property would change hands between a willing and financially able buyer and a willing seller, neither being under any compulsion to buy or to sell and both having reasonable knowledge of all the uses to which the property is adapted and for which it is capable of being used. For the purposes of this section, the acquisition of an interest in land by an entity having the power of eminent domain with respect to the interest acquired shall not be considered competent evidence of the true value in money of comparable land.

Authors Notes: The Machinery Act of North Carolina has been provided as an integral part of these Uniform Schedules of Value, Standards, and Rules. All applicable not recited in this test are included by reference.

PROPERTY VALUATION

In addition to the specific statutory direction and appellate court rulings, it is necessary to be well-versed with the nature of appraised values of property and with the basic economic principles that serve as the foundation of the valuation process.

APPRAISAL THEORY

An appraisal, in itself, is nothing more than an opinion of value. This does not imply, however, that one opinion is necessarily as good as another; there are valid and accurate appraisals, and there are invalid and inaccurate appraisals. The validity of an appraisal can be measured against the supporting evidence from which it was derived, and its accuracy against that very thing it is supposed to predict - the actual behavior of the market. Each is fully contingent upon the ability of the appraiser to record adequate data and to interpret that data into an indication of value.

Appraising real property, like the solving of any problem, is an exercise in reasoning. It is a discipline, and like any discipline, it is founded on fundamental economic and social principles. From these principles evolve certain premises which, when applied to the valuation of property, serve to explain the reaction of the market. This section concerns itself with those concepts and principles basic to the property valuation process. One cannot overstate the necessity of having a workable understanding of them.

CONCEPT OF PRPOERTY

The definition of property should begin the discussion of assessing value. Property is associated with the right of any person to possess, use, enjoy and dispose of a thing. Property, then, is a broad term expressing the relationship between owners and their rights in and to possessions. In appraising real property, the parcel to be appraised includes the rights inherent in ownership of the property be included in the opinion of value rendered by the reappraisal.

All property may be divided into two major categories-real property and personal property. Real property is defined as the sum of the tangible and intangible rights in land and improvements. This refers to the interest, benefits, and rights inherent in the ownership of physical real estate. Real estate is the physical land and everything permanently attached to it. Personal property consists of movable items not permanently affixed to, or part of, the real estate and is commonly known as "personal" or "chattels".

Real estate may be divided into two categories-land and improvements. Land is defined as the surface of the earth together with everything under its boundary and everything over it. Improvements (land improvements, such as paving, fencing, structures, and landscaping etc.) consist of immovable items affixed to and becoming part of the real

estate. "Permanently affixed" refers to the original intent of the owner and economic life of the improvements.

Defining the term "affixed" has been the subject of much litigation, and the courts are subject to change the meaning. In general terms personal property annexed to land is called a fixture. Chattels that have been annexed to land are called a fixture.

These chattels that have been annexed to the land so as to lose their character as chattels and become real estate for ad valorem tax purposes. In determining the nature of the annexation of personal property, there are two basic considerations: first, the adaptability of the personal property to the use part of the realty and second, the person by whom the annexation is made and his interest in the land and the personal property.

Courts have held that if the chattel is affixed to the land so that it loses its original physical character and cannot be restored to its original condition as a practical matter; it loses its nature as personal property and becomes real property. Two tests relied upon to determine if personal property becomes real estate are: first the intention of the person who put the item in its place and second whether the item may be removed from the real estate without damaging either the item or the real estate. Also, to be considered are the use of the item and the generally excepted conveyance of the item in real estate transactions.

In identifying property, a distinction must be made between that of tangible and intangible property. Tangible property consists of actual physical property. Intangible property is evidence of ownership of property rights. Some examples of intangible property are patent rights, copyrights, notes, mortgages, deeds of trust, and stock certificates.

BUNDLE OF RIGHTS

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

Real property ownership involves the Bundle of Rights Theory which asserts that the owner has the right:

1. To enter or leave it (real property)
2. Use it
3. Sell it
4. Lease or rent it
5. Give it away

Law guarantees these rights, but they are subject to certain governmental and private restrictions.

The Governmental restrictions are found in its power for:

1. Taxation – the right to tax the property for support of the government.
2. Eminent domain – the right to take the property for public use provided that just compensation is paid.
3. Police power – the right of enforcing any regulations deemed necessary to promote the safety health, morals, zoning, building codes, and general welfare of the public.
4. Escheat – the right to provide revert to the state in cases where there are no legal heirs can be ascertained or for nonpayment of taxes.

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

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

THE NATURE AND MEANING OF VALUE

An appraisal is an opinion or estimate of value. The concept of value is basic to the appraisal process and calls for a thorough understanding. The American Institute of Real Estate Appraisers' Appraisal Terminology Handbook, 1981 edition, offers the following definitions of value:

"The measure of value is the amount (for example, of money) which the potential purchaser probably will pay for possession of the thing desired."

"The ratio of exchange of one commodity for another, for example, one bushel of wheat in terms of a given number of bushels of corn; thus the value of one thing may be expressed in terms of another thing. Money is the common denominator by which value is measured."

"It is the power of acquiring commodities in exchange, generally with a comparison of utilities - the utility of the commodity parted with (money) and that of the commodity acquired in the exchange (property)."

"Value depends upon the relation of an object to unsatisfied needs; that is, supply and demand."

"Value is the present worth of future benefits arising out of ownership to typical users and investors."

With these definitions, one can see that value is not an intrinsic characteristic of the commodity itself. On the contrary, value is determined by people, created by desire, modified by varying degrees of desire and reduced by lack of desire. Throughout the definitions a relationship between the purchase and the commodity (property) is implied; this relationship is "value". A purchaser desires a property because it is a useful commodity in that it has utility. Utility is a prerequisite to value, but utility standing alone does not sufficiently cause value. If a great supply of a useful commodity exists, as for example air, needs would be automatically satisfied, desire would not be aroused, and therefore value would not be created. Therefore, besides having utility, to effectively arouse desire, the commodity must also be scarce.

One additional factor is necessary to complete the value equation . . . the ability to become a buyer. A translation must be made of desire into a unit of exchange; a buyer must have purchasing power. The relationship is now complete . . . the commodity has utility and is relatively scarce, it arouses desire, and the buyer is able to satisfy that desire by trading for it . . . value is created. The question is how much value, and herein lays the job of the appraiser.

Numerous definitions of value have been offered, some simple and some complex. It would seem though that any valid definition of value would necessarily embody the elements of utility, desire, scarcity and purchasing power. Furthermore, the concept of value very rarely stands alone. Instead, it is generally prefixed by a descriptive term that serves to relate it to a specific appraisal purpose or activity such as "loan value". Since appraisals are made for a variety of reasons, it is important for the appraiser to clarify the specific purpose for the appraisal and the type of value that he seeks to estimate.

For Ad Valorem Tax purposes, the value sought is generally market value. Statute 105-283 from the North Carolina Machinery Act describes market value as follows.

All property, real and personal, shall as far as practicable be appraised or valued at its true value in money. When used in this Subchapter, the words "true value" shall be interpreted as meaning market value, that is, the price estimated in terms of money at which the property would change hands between a willing and financially able buyer and a willing seller, neither being under any compulsion to buy or to sell and both having reasonable knowledge of all the uses to which the property is adapted and for which it is capable of being used. For the purposes of this section, the acquisition of an interest in land by an entity having the power of eminent domain with respect to the interest acquired shall not be considered competent evidence of the true value in money of comparable land.

VALUE IN USE AS OPPOSED TO VALUE IN EXCHANGE

We have stated that there are a number of qualifying distinctions made in reference to the meaning of value. One of the most common and probably the most important relative to the purpose of this manual is the distinction between value in use and value in exchange. We have defined market value as a justifiable price which buyers, in general, will pay in the market. The question arises then as to the value of property which, by nature of its special and highly unique design, is useful to the present owner, but relatively less useful to buyers in the market. One can readily see that such a property's utility value may differ greatly from its potential sales price. It is even possible that no market for such a property exists. Such a property is said to have value in use, which refers to the actual value of a commodity to a specific person, as opposed to value in exchange, which aligns itself with market value, referring to the dollar-value of a commodity to buyers in general. In a sense, value in use embodies the objective premise, which maintains that value is within the object. This concept easily accommodates cost. While with value in exchange the subjective element is accentuated. Value in exchange, being the primary concern for the assessor, reflects the actions and reactions of buyers, sellers and investors and is considered market value.

THE PRINCIPLE OF SUPPLY AND DEMAND

In order for property to have value, there must be desirability, utility, scarcity, and economic purchasing power. Utility is the capacity of goods to create desire and should not be confused with usefulness. While utility is a subjective concert, usefulness is an objective concept inherent in the property.

Scarcity helps to create desire. There are two economic forces which determine scarcity supply and demand.

Among the forces which constantly operate to influence supply and demand are population growth, new techniques in transportation, purchasing power, price levels, wage rates, taxation, governmental controls, and scarcity. A sudden population growth in an area would create an increase in demand for housing. If the demand increased at a higher rate than the supply, this could soon be a scarcity of housing. If the demand was backed up by purchasing power, rentals and sale prices would tend to increase and ultimately reach a level which would tend to stimulate more builders to compete for the potential profits and thus serve to increase the supply toward the level of demand. As the supply is increased demand would begin to taper off. This would cause rentals and sale prices to level off. When builders, due to increases in labor and material rates, are no longer able to build cheaply enough to meet the new level of prices and rents, competition would tend to taper off and supply would level off. The cycle is then complete.

Balance occurs when reasonable competition serves to coordinate supply with demand. When competition continues unchecked to produce a volume that exceeds the demand, the net returns to investors are no longer adequate to pay all the costs of ownership, resulting in loss rather than profit and consequently, a decline in values.

A community may well support two shopping centers, but the addition of a third shopping center may increase the supply to excess. If this occurs, one of two effects are caused; either the net dollar return to all the shopping centers will be reduced below that level necessary to support the investment, or one of the shopping centers will flourish at the others' expense.

Utility and scarcity by themselves do not confer value on an object, unless the desire by the purchaser is present, a desire backed by the economic purchasing power of the buyer(s).

In any discussion of value, a comparison of the terms "cost" and "price" is useful. Cost may be defined as the sacrifice made in the acquisition of property and commonly reflects the perspective of the buyer. Either the purchase of an existing property or the construction of a new property may incur cost. Price may be defined as the amount of money given, expected or arrived at arranging for the exchange of property. Cost and price may be the same, but not necessarily. An example would be a purchaser pays \$200,000 to buy a property, it may be stated that the property cost \$200,000. However, while price is defined in terms of money, cost is expressed as a sacrifice. A sacrifice may be in terms of money, labor, or time. Also, when property is sold, the price may be either above or below the owner's cost.

MARKET VALUE

The terms "value" and "market value" though similar are not the same. There are many different definitions for market value provided by statutes and constitutions of all fifty states for property taxation and realtors used to market property. The assessor must adhere to the definition of market value as stated in N.C.G.S. 105-283 (see section on statutes) and decisions rendered by the North Carolina Appellate Courts.

The following important points regarding market value should be noted:

1. It is the most probable price.
2. It is not the highest, lowest, or average price.
3. It is expressed in terms of money.
4. It implies a reasonable time for exposure to the market.
5. It implies that both buyer and seller are well-informed of the uses to which the property may be put. It requires an arm's length transaction in the open market.

6. It requires a willing buyer and willing seller, with no advantage being taken by either buyer or seller. Neither, buyer or seller placed in a position of having to purchase or sale to avoid legal action, or dispose of property. This is a constraint against consideration of foreclosure and short sales.
7. It recognizes the present use as well as the potential use of property.

Note: In analyzing sales of property, close attention is paid to identifying all transactions that are the result of a foreclosure or short sale. Such sales are not retained for further consideration in determining the schedules set out elsewhere in this document, and neither will they be considered in analyzing the reappraisal results via the State-mandated assessment/sales ratio study. For a complete list of conditions, that the NC Department of Revenue distributes to all 100 NC counties to be used in determining qualified or disqualified sales (not consider an arm's length transaction), please refer to the Addendum, Document.

THE PRINCIPLE OF HIGHEST AND BEST USE

The way in which property is used, or could be used, plays an essential role in determining its market value. An assessor recognizes this as the highest and best use. The highest and best use for a property is that use which will produce the highest net return to the land for a given period of time within the limits of those uses which are economically feasible, probable, physically possible and legally permissible.

On a community-wide basis, the major determining factor in highest and best use is the maximum quantity of land that can be devoted to a specific use and still yield a satisfactory return. Once a suitable basic use has been chosen for a specific property, each increment of capital investment to the existing or planned improvement will increase the net return to the land only up to a certain point; after this point is reached; the net return to the land begins to diminish. This is the point at which the land is at its highest and best use

For example, in planning a high-rise office building, each additional upper floor represents an extra capital expenditure that must yield a certain return to the investor. This return will be dependent upon the levels of economic rent that the market will bear at the time. An optimum number of floors can be calculated above which the income yield requirements of additional expenditures will no longer be satisfactorily met. This, notwithstanding the possibility of other more particular considerations, should determine the number of stories of the building.

Detailed analysis of this type is rarely thrust upon the property tax appraiser. Generally the tax appraiser will find the most prudent course of action is to consider the present use and follow development rather than anticipate it.

Just as everything changes with time, the highest and best use of property will change. The charter of a neighborhood may be altered, thereby creating demands for different uses. The assessor periodically reviews conclusions as to highest and best use and revises them according to the data that are collected. As an example, zoning one of the restraints on use may be changed, which changes the allowable use.

BASIC PRINCIPLES OF VALUE

Certain principles are generally accepted as having a direct effect on the modern concept of value evolving from economic doctrine. It should be emphasized that these principles rarely if ever can be considered in isolation; it is typical to conceive them in an interrelated setting, for they tend to complement and accompany one another. These principals after considering the interrelationship among them results in the highest and best use.

The following principals are essential to appraisal function:

PRINCIPAL OF ANTICIPATION:

Market value is the present worth of all the anticipated future benefits to be derived from the property. Income stream and amenities may be considered benefits. Anticipated future benefits are those benefits anticipated by the market. Past sales of the property and past income are of importance only when they are an indication of what may be expected in the future. The principal of change works in conjunction with the principal of anticipation.

PRINCIPAL OF BALANCE:

The principal of balance when applied to a property states that maximum market value is reached when the four agents of production – labor, coordination or management, capital and land attain a state of equilibrium.

THE PRINCIPLE OF CHANGE:

The principal states that market value is never constant, because economic, social, and governmental forces are at work to change property and its environment. Because change is continuous, the estimate of market value is valid only on the effective day for which it is made. This principal works in conjunction with the principal of anticipation.

The impact of change on the value of real property manifests itself in the life cycle of a neighborhood. The cycle is characterized by three stages of evolution: the development and growth evidenced by improving values; the leveling off stage evidenced by static values; and finally, the stage of infiltration of decay evidenced by declining values.

The highest and best use today is not necessarily the highest and best use tomorrow. The highest and best use of the land often lies in a succession of uses. A declining single-family residential neighborhood may be ripe for multi-family, commercial or industrial development. Whether it is or not depends upon the relationship of present or anticipated future demand with existing supply.

In estimating value, the appraiser is obligated to reasonably anticipate the future benefits, as well as the present benefits derived from ownership and to evaluate the property in light of the quality, quantity, and duration of these benefits based on actual data as opposed to speculative or potential benefits that may or may not occur.

PRINCIPAL OF COMPETITION:

This principal states that when substantial profits are being made, completion is created. This leads to the aphorism that profit tends to bred completion and that excess profit bred ruinous completion.

PRINCIPAL OF CONFORMITY:

The principal of conformity states that maximum market value is reached when a reasonable degree of economic and social homogeneity is expected in the foreseeable future. As applied to improvements, reasonable homogeneity implies reasonable similarity, not monotonous uniformity. Similarity in age, income, background, etc. is conformity when applied to residents. In understanding the neighborhood concept in mass appraisal, conformity is essential and works with the principals of progression and regression.

PRINCIPAL OF CONSISTANCE USE:

This principal states that the property must be valued with a single use for the entire property. Property valued on the basis on one use for land and another for the improvements is improper. The principal is especially applicable to a property in transition from one use to another. While the improvements on a parcel ready for a higher use may theoretically have a long physical life, their economic life may have already terminated.

PRINCIPAL OF CONTRIBUTION:

This principal states that a value of an agent of production (or a property component) depends upon its contribution to the whole. This is another way of saying that cost does not necessarily equal value. Some examples are:

1. A garage is erected on an existing home at a cost of \$30,000. Based on comparable sales analysis, it is determined that such a garage adds \$35,000 to the overall market value of the property. In this case \$35,000 is the value contribution of the garage.
2. Cost does not always equal value. A stone fire place cost \$10,000 to construct. Sales analysis in this neighborhood reflects a standard fireplace only adds \$5,000 of value to a home. A stone fireplace may only add \$6,000 of contribution to the value of the home not the cost of \$10,000.

This principal is the basis for the adjustment process of the comparative sales approach to value and the direct sales comparison method of land valuation, for determining whether physical deterioration and functional obsolescence are curable or incurable, and for justifying remodeling and modernization. Many of the adjustments to value that are detailed herein for various property characteristics, are based on their contribution to the whole property, not their actual cost. This principal works in conjunction with the principals of balance, increasing and decreasing returns, and surplus productivity.

PRINCIPAL OF INCREASING AND DECREASING RETURN:

This principal states that when successive increments of one agent of production are added to fixed amounts of other agents, future net benefits (income or amenities) will increase up to a certain point (point of decreasing returns), after which successive increments will decrease future net benefits.

PRINCIPLES OF PROGRESSION AND REGRESSION:

The principles of progression and regression related to how surroundings affect the value of an object. Progression indicates that the value of a lesser object is enhanced by association with better objects of the same type. The principal of regression states that when there are dissimilar properties within the same general classification and in the same area, the better property will be adversely affected.

THE PRINCIPLE OF SUBSTITUTION:

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

PRINCIPAL OF SUPPLY AND DEMAND:

The forces of supply and demand determined market value.

PRINCIPAL OF SURPLUS PRODUCTIVITY:

This principal states that the net income remaining after the cost of the agents of production-labor, coordination, and capital has been paid is considered surplus productivity.

TRADITIONAL APPROACHES TO VALUE

In the preceding paragraphs, it has been stated that value is an elusive item that occurs in many different forms, and that the forces and influences which combine to create, sustain, or destroy value are numerous and varied. It is the appraiser's function to define the type of value sought (market value in North Carolina for taxation purposes), to compile and to analyze all related data, and giving due consideration to all the factors which may influence the value, to process and translate that data into a final opinion or *estimate of value*. This he must do for each property he is to appraise.

The processing of this data into a conclusion of value generally takes the form of three recognized approaches to value: Cost Approach, Market Data Approach and Income Approach. Underlying each of the approaches is the principle that the justifiable price of a property is no more than the cost of acquiring and/or reproducing an equally desirable substitute property. The use of one or all three approaches in the valuation of a property is determined by the quantity, quality, and accuracy of the data available to the appraiser.

The *COST APPROACH* involves making an estimate of the depreciated cost of reproducing or replacing the building and site improvements. *Reproduction Cost* refers to the cost at a given point in time of reproducing a replica property, whereas *Replacement Cost* refers to the cost of producing improvements of equal utility. Depreciation is deducted from this cost new for loss in value caused by physical deterioration, and functional or economic obsolescence. To this depreciated cost is then added the estimated value of the land, resulting in an indication of value derived by the Cost Approach.

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

The *MARKET DATA APPROACH* (Sales Comparison Approach) involves the compiling of sales and offerings of properties that are comparable to the property being appraised. These sales and offerings are then adjusted for any dissimilarity, and a value range obtained by comparison of said properties. The approach is reliable to the extent that the properties are comparable, and the appraiser's judgment of proper adjustments is sound. The procedure for using this approach is essentially the same for all types of property with the only difference being the elements of comparison.

The significance of this approach lies in its ability to produce estimates of value, which directly reflect the attitude of the market. Its application is contingent upon the availability of comparable sales, and therefore finds its widest range in the appraisal of vacant land and residential properties. Some examples, of applicable North Carolina case law, are:

Neither this section nor G.S. 105-317(a) requires the commission to value property according to its sale price in a recent arm's length transaction when competent evidence of a different value is presented.

In re Greensboro Office Partnership, 72 N.C. App. 635, 325 S.E. 2d 24, cert. denied, 313 N.C. 602, 330 S.E.2d 610 (1985)

Where sale was not between a willing buyer and a willing seller, as contemplated by this section, sales price was not indicative of property's true value.

In re Phoenix Ltd. Partnership, 134 N.C. App. 474, 517 S.E.2d 903 (1999)

Essentially, North Carolina law prohibits the presumption that the sale price of any particular property must be the basis for its appraised value for ad valorem tax purposes. Instead, reliance is placed on the greater weight of evidence determined from a larger sampling of comparable properties and as a result, the appraised value may be less than or greater than the sale price of any particular property.

The *INCOME APPROACH* measures the present worth of the future benefits of a property by the capitalization of the net income stream over the remaining economic life of the property. The approach involves making an estimate of the "effective gross income" of a property, derived by deducing the appropriate vacant and collection losses from its estimated economic rent, as evidenced by the yield of comparable properties. From this figure then is deducted applicable operating expense, the cost of taxes and insurance, and reserve allowances for replacements resulting in an estimate of net income, which may then be capitalized into an indication of value.

The approach obviously has its basic application in the appraisals of properties universally bought and sold on their ability to generate and maintain a stream of income for their owners. The effectiveness of the approach lies in the appraiser's ability to relate to the changing economic environment and to analyze income yields in terms of their relative quality and durability.

PPROPERTY VALUITION TECHNIQUES

APPLYING THE COST APPROACH

If the highest and best use of a property is its present use, a valid indication of value may be derived by estimating the value of the land, and adding the land value to the depreciated value of the structures on the land; the resulting equation being . . .

$$\begin{array}{r} \text{Estimated Land Value} \\ + \text{ Estimated Replacement Cost New of Structures} \\ - \text{ Estimated Depreciation} \\ \hline = \text{ Indication of Property Value} \end{array}$$

Since estimating the land value is covered in a separate section, this section will address itself to the two remaining elements, Replacement Cost and Depreciation.

REPLACEMENT COST

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

In actual practice, outside of a few historic type communities in this country, developers and builders, for obvious economic reasons, replace buildings, not reproduce them. It logically follows that if an appraiser's job is to measure the actions of knowledgeable persons in the market place, the use of proper replacement costs should provide an accurate point of beginning in the valuation of most improvements.

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

ESTIMATING REPLACEMENT COST

There are various methods that may be employed to estimate replacement cost new. The methods widely used in the appraisal field are the quantity-survey method, the unit-in-place or component part-in-place method, and the model method.

The *Quantity-Survey Method* involves a detailed itemized estimate of the quantities of various materials used, labor and equipment requirements, architect and engineering fees, contractor's overhead and profit, and other related costs. This method is primarily employed by contractors and cost estimators for bidding and budgetary purposes and is much too laborious and costly to be effective in every day appraisal work, especially in the mass appraisal field. The method, however, does have its place in that it is used to develop certain unit-in-place costs which can be more readily applied to estimating for appraisal purposes.

The *Unit-in-Place Method* is employed by establishing in-place cost estimates (including material, labor, overhead and profit) for various structural components. The prices established for the specified components are related to their most common units of measurement such as cost per yard of excavation, cost per lineal foot of footings, and cost per square foot of floor covering.

The unit prices can then be multiplied by the respective quantities of each as they are found in the composition of the subject building to derive the whole dollar component cost, the sum of which is equal to the estimated cost of the entire building, providing of course, that due consideration is given to all other indirect costs which may be applicable. This components part-in-place method of using basic units can also be extended to establish prices for larger components in-place such as complete structural floors (including the finish flooring, sub-floor, joists and framing) which are likely to occur repeatedly in a number of buildings.

The *Model Method* is still a further extension, in that unit-in-place costs are used to develop base unit square foot or cubic foot costs for total specified representative structures in place, which may then serve as "models" to derive the base unit cost of comparable structures to be appraised. The base unit cost of the model most representative of the subject building is applied to the subject building and appropriate tables of additions and deductions are used to adjust the base cost of the subject building to account for any significant variations between it and the model.

Developed and applied properly, these pricing techniques will assist the appraiser in arriving at valid and accurate estimates of replacement cost new as of a given time. This given time for ad valorem tax purposes is always January 1 of the reappraisal year. The cost generally represents the upper limit of value of a structure. The difference between its replacement cost new and its present value is depreciation. The final step in completing the Cost Approach then is to estimate the amount of depreciation and deduct said amount from the replacement cost new.

DEPRECIATION

Simply stated, depreciation can be defined as "a loss in value from all causes." As applied to real estate, it represents the loss in value between market value and the sum of

the replacement cost new of the improvements plus the land value as of a given time. The causes for the loss in value may be divided into three broad classifications: Physical Deterioration, Functional Obsolescence, and Economic Obsolescence.

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

Functional Obsolescence is a condition caused by either inadequacies or over-adequacies in design, style, composition, or arrangement inherent to the structure itself, which tends to lessen its usefulness. Like physical deterioration, the condition may be considered either curable or incurable. Some of the more common examples of functional obsolescence are excessive wall and ceiling heights, excessive structural construction, surplus capacity, ineffective layouts, and inadequate building services.

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

ESTIMATING DEPRECIATION

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

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

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

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

Total accrued depreciation may be estimated by first estimating the total useful life of a structure and then translating its present condition, desirability, and usefulness into an effective age (rather than an actual age) which would represent that portion of its total life (percentage) which has been used up.

Total accrued depreciation may also be estimated by deriving the amount of depreciation recognized by purchasers as evidenced in the prices paid for property in the market place; the loss of value being the difference between the cost of replacing the structure now and its actual selling price (total property selling price less the estimated value of the land).

APPLYING THE MARKET APPROACH

An indication of the value of a property can be derived through analysis of the selling prices of comparable properties. The use of this technique, often referred to as the “comparison approach” or “comparable sales approach”, involves the selection of a sufficient number of valid comparable sales and the adjustment of each sale to the subject property to account for variations in time, location, site and structural characteristics.

Even though the sales comparison approach is a valuation technique of its own, comparisons are made in each of the three approaches to valuation. It may be more accurate to say the entire appraisal process is a series of comparisons. This is especially true in the mass appraisal process for property taxation, where in the final analysis it must be demonstrated that all taxable properties have been uniformly, accurately and equitably valued.

INTRODUCTION TO THE SALES COMPARSION APPROACH

For assessment purposes, market values are defined by constitutions, statutes and case law. When sales data is available, the sales comparison approach is generally considered the most reliable of the approaches to value. However, in North Carolina assessment litigation, under the “rules of evidence” a bona fide sale of the subject property may not be considered the best evidence of market value “when competent evidence of different value is presented”. In re Greensboro Office Partnership, 72 N.C. App. 635, 325 S.E.2d24, cert. denied, 313 N.C. 602,330 S.E.2d 610 (1995).

Emphasizing uniformity and the equitable distribution of the tax burden relative to the premise that similar properties should share similarly in that burden, North Carolina statutory language and the interpretation of relating actual sales to market value by the North Carolina Courts both provide this guidance.

The sales comparison approach models the behavior of the market by comparing the properties being appraised (subject property) with similar properties that have recently sold (comparable properties). Comparable properties are selected for their similarity to the subject property. Their sales prices are then adjusted for their differences from the

subject. Finally, a market value for the subject is determined from the adjusted sales prices of the comparable properties.

To understand the sales comparison approach an appraiser must understand the principles of supply and demand. The interaction of supply and demand factors impacts property prices. Supply depends on current inventories and, in a larger sense, the availability of human skills, materials, and capital. While demand is influenced by population levels, mortgage rates, income levels, local services, housing trends, and the cost of substitutes. The principal of substitution is one demand factor that implies that the market will recognize differences in utility between the subject and its best alternatives by a difference in price.

The sales comparison approach requires the following steps:

1. Definition of the appraisal problem.
2. Data collection.
3. Analysis of market data to develop units of comparison and select attributes for adjustment (model specifications)
4. Development of reasonable adjustments (model calibration).
5. Application of the model to adjust the sales prices of comparable properties to the subject property.
6. Analysis of the adjusted sales price to indicate the value of the subject property.

The entire valuation process depends on accurately defining the subject property, because the nature of the property determines the sources of information, methods of comparable selection, and adjustment techniques.

Defining the subject property includes:

1. Identifying the property (parcel number or pin for ad valorem tax purposes)
2. The rights to be appraised (generally Fee Simple for ad valorem tax purposes)
3. The date of appraisal (January 1 of the appraisal year for NC ad valorem tax purposes).
4. The use (highest and best use)
5. The type of value to estimate (market value, for NC ad valorem tax purposes)

This approach has a wide application as a method of estimating value, however, there are factors that can or do limit the usefulness of the sales comparison approach. In spite of these limitations this approach has a broad application in all appraisal work. The value estimates found by the use of this approach are considered particularly significant because they are expressions of value as established by transactions in the market place.

Even though the sales comparison approach is mostly used for estimating market value for residential property it may also be used for some commercial and industrial properties if sufficient data is available. Additionally, some valuation parameters of the other

valuation approaches (cost and income) are influenced by the application of and observations learned from the sales comparison approach.

SELECTING VALID COMPARABLES

Since market value has been defined as the price which an informed and intelligent buyer, fully aware of the existence of competing properties and not being compelled to act is justified in paying for a particular property, it follows that if market value is to be derived from analyzing comparable sales, that the sales must represent valid "arms length" transactions. Due consideration must be given to the conditions and circumstances of each sale before selecting the sales for analysis. Some examples of sales that do not normally reflect valid market conditions are as follows:

Sales in connection with: foreclosures, short sales, bankruptcies, condemnations and other legal actions.

Sales to or by federal, state, county and local governmental agencies.

Sales to or by religious, charitable or benevolent tax exempt agencies.

Sales involving family transfers, or "love and affection."

Sales involving intra-corporate affiliations.

Sales involving the retention of life interests.

Sales involving cemetery lots.

Sales involving mineral or timber rights, and access or drainage rights.

Sales involving the transfer of part interests.

In addition to selecting valid market transactions, it is equally important to select properties that are truly comparable to the property under appraisal. For instance, sales involving both real property and personal property or chattels may not be used unless the sale can be adjusted to reflect only the real property transaction, nor can sales of non-operating or deficient industrial plants be validly compared with operating plants. The comparable sales and subject properties must exhibit the same use, and the site and structural characteristics must exhibit an acceptable degree of comparability.

PROCESSING COMPARABLE SALES

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

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

In addition to the residential amenities, the buyer of agricultural property is primarily interested in the productive capacity of the land, the accessibility to the market place, and the condition and functional utility of the farm buildings and structures on the land.

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

In applying the market data approach to commercial/industrial property, the appraiser will generally find it difficult to locate a sufficient number of comparable sales, especially of properties that are truly comparable in their entirety. It will, therefore, generally be necessary to select smaller units of comparison such as price per square foot, per unit, per room, etc. In doing so, great care must be exercised in selecting a unit of comparison that represents a logical common denominator for the properties being compared. A unit of comparison that is commonly used and proven to be fairly effective is the Gross Rent Multiplier, generally referred to as G.R.M., which is derived by dividing the gross annual income into the sales price. Using such units of comparison enables the appraiser to compare two properties that are similar in use and structural features, but differ significantly in size and other characteristics.

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

analysis of the factors should enable the appraiser to narrow the range down to the value level that is most applicable to the subject property.

APPLYING THE INCOME APPROACH

INTRODUCTION

The justified price paid for income producing property is no more than the amount of investment required to produce a comparably desirable return; and since the market can be analyzed in order to determine the net return actually anticipated by investors, it follows that the value of income producing property can be derived from the income which it is capable of producing. What is involved is an estimate of income through the collection and analysis of available economic data, the development of a property capitalization rate, and the processing of the net income into an indication of value by employing one or more of the acceptable capitalization methods and techniques.

THE PRINCIPLES OF CAPITALIZATION

Capitalization is the process for converting the net income produced by property into an indication of value. Through the years of appraisal history, a number of procedures have been recognized and employed by appraisal authorities in determining the value of real estate by the income approach. Although present-day practice recommends only certain methods, we will at least touch on the other approaches to value - even though they may not be accepted in today's appraisal scene because they do not accurately reflect the current market conditions.

EXPLORING THE RENTAL MARKET

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

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

The next step is to similarly collect income and expense data on individual properties, and to evaluate the data against the established guidelines. The collection of income and expense data (I & E) is an essential phase in the valuation of commercial properties. The appraiser is primarily concerned with the potential earning power of the property. The objective is to estimate its expected net income. Income and Expense Statements of past

years are valuable only to the extent that they serve this end. The statements must not only be complete and accurate, but must also stand the test of market validity. Consideration of the following factors should assist the appraiser in evaluating the income and expense (I & E) data in order to arrive at an accurate and realistic estimate of net income. This is sometimes referred as net income before recapture.

Chatham County does send surveys soliciting income and expense data from property owners and lessees of commercial (income-producing) property. The return results for these surveys are limited at best. Typically, more significant amount of additional information is made available as part of the appeal process. This data (income and expense) is generally provided in support of a claim seeking a decrease in appraisal value. The quality/worth of that data is dependent on the documentation provided. Lease information (lease rates, terms, and other stated considerations) is best, with undocumented statements the least useful.

Due to the limited return rate of the survey, the county may utilize other outside sources of information. Even though this may be done on a limited bases it could be useful during the appeal process.

QUESTIONS RELATING TO INCOME DATA

- A. Was the reported income produced entirely by the subject property? Very often the rent will include an amount attributable to one or more additional parcels of real estate. In this case, it would be necessary to obtain the proper allocations of rent.
- B. Was the income attributable to the subject property as it physically existed at the time of the appraisal, or did the appraisal include the value of leasehold improvements and remodeling for which the tenant paid in addition to rent? If so, it may be necessary to adjust the income to reflect economic rent.
- C. Does the reported income represent a full year's return? It is often advisable to obtain both monthly and annual amounts as verification.
- D. Does the income reflect current economic rent? Is either part or all of the income predicated on old leases? If so, what are the provisions for renewal options and rates?
- E. Does the reported income reflect 100% occupancy? What percentage of occupancy does it reflect? Is this percentage typical of this type of property, or is it due to special non-recurring causes?
- F. Does the income include rental for all marketable space? Does it include an allowance for space, if any, which is either owner or manager occupied? Is the allowance realistic?
- G. Is the income attributable directly to the real estate and conventional amenities? Is some of the income derived from furnishings and appliances? If so, it will be necessary to adjust the income or make provisions for reserves to eventually replace them, whichever local custom dictates.

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

Note: The survey data received from property owners/lessors where their income and expense information is stated is held confidential. Survey data may be compiled into a summary document and incorporated herein for subsequent consideration either prior to a final determination for appraisal purposes or for supporting evidence of value as part of the appeal process.

Retail Stores	The annual net gross sales. (Gross sales less returned merchandise).
Hotels and Motels	The annual operating statement of the business. If retail or office space is leased in these properties, obtain the actual rent paid.
Theaters	The annual gross receipts (including admissions and concessions) and seating capacity.
Automobile Parking	The annual gross receipts.

ANALYSIS OF EXPENSE DATA

The appraiser must consider only those expenses that are applicable to the cost of ownership; that is, those expenses that are normally owner incurred. Any portion of the expenses incurred directly or indirectly by the tenant should not be considered. Each expense item must stand the test of both legitimacy and accuracy. How do they compare with the established guidelines and norms? Are they consistent with the expenses incurred by comparable properties?

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

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

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

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

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

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

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

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

Decorating and minor alterations - are necessary to maintain the income stream of many commercial properties. In this respect they are legitimate expenses. However, careful scrutiny of these figures is required. Owners tend to include the cost of major alterations and remodeling which are, in fact, capital expenditures, and as such are not legitimate operating expenses.

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

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

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

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

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

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

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

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

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

CAPITALIZATION METHODS

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

Value = Net Income divided by Capitalization Rate

The *Straight Line* and *Sinking Fund* methods are both actual forms of Straight Capitalization, with one using Straight Line recapture and the other using Sinking Fund recapture. Both methods follow the same basic principles as Direct Capitalization, differing only in that they provide for separate capitalization rates for land and buildings; the building rate differing from the land rate in that it includes an allowance for recapture.

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

Depreciation allowances begin to “run out” between seven and ten years, so the advantages of owning the property are reduced considerably. A prudent owner may choose to sell the property at this point and re-invest in another property so that he may begin the depreciation cycle again and continue to take full advantage of the favorable tax laws.

For these reasons, the Straight Line Capitalization Method does not usually follow what the market indicates.

Straight Line recapture calls for the return of investment capital in equal increments or percentage allowances spread over the estimated remaining economic life of the building.

Sinking Fund recapture calls for the return of invested capital in one lump sum at the termination of the estimated remaining economic life of the building. This is accomplished by providing for the annual return of a sufficient amount needed to invest and annually re-invest in “safe” interest-bearing accounts, such as government bonds or certificates of deposit, which will ultimately yield the entire capital investment during the course of the building's economic life.

Annuity Capitalization lends itself to the valuation of long-term leases. In this method, the appraiser determines, by the use of annuity tables, the present value of the right to receive a certain specified income over stipulated duration of the lease. In addition to the value of the income stream, the appraiser must also consider the value that the property will have once it reverts back to the owner at the termination of the lease. This reversion is valued by discounting its anticipated value against its present day worth. The total property value then is the sum of the capitalized income stream plus the present worth of the reversion value.

CURRENT TECHNIQUES

There are two methods, however, that do lend themselves to an accurate measure of market value based on potential income. These are Direct Capitalization, utilizing the Direct Comparison Method of Rate Selection, and Mortgage Equity Capitalization.

In *Direct Capitalization*, the appraiser determines a single “overall” capitalization rate. This is done through analysis of actual market sales of similar types of properties. He develops the net income of each property, and divides the net income by the sales price to arrive at an overall rate to provide an indication of value. Direct capitalization rates have been relied on in many appellate court rulings for the valuation of income-producing properties for ad valorem tax purposes.

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

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

RESIDUAL TECHNIQUES

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

The *Property Residual Technique* is an application of Direct Capitalization. In this technique, the total net income is divided by an overall capitalization rate (which provides for the return on the total investment) to arrive at an indicated value for the property. This technique has received more popular support in recent years because it closely reflects the market. With this technique, the capitalization rate may be developed by either "direct comparison" in the market or by the Mortgage Equity Method.

The *Building Residual Technique* requires the value of the land to be a known factor. The amount of net income required to earn an appropriate rate of return on the land investment is deducted from the total net income. The remainder of the net income (residual) is divided by the building capitalization rate (which is composed of a percentage for the return on the investment, plus a percentage for the recapture of the investment) to arrive at an indicated value for the building.

The *Land Residual Technique* requires the value of the building to be a known factor. The amount of net income required to provide both, a proper return on and the recapture of the investment is deducted from the total net income. The remainder of the net income (residual) is then divided by the land capitalization rate (which is composed of a percentage for the return on the investment) to arrive at an indicated value for the land.

MORTGAGE EQUITY METHOD EXAMPLE

For purposes of illustration, assume an investment financed with a 70% loan at 14.0% interest. The term of the mortgage is 20 years, paid off in level monthly payments. The total annual cost for principal and interest on such a loan can be determined by referring to the mortgage equity tables. Select the Constant Annual percent for an interest rate of 14.0% and a term of 20 years. Note that the constant is 14.92% of the amount borrowed, or .92% more than the interest rate alone.

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

	PORTION	RATE	=	WEIGHTED RATE
Mortgage loan (principle interest)	70%	.1492	=	.1044
Equity (down payment)	30%	.18	=	.0540
Weighted Average	<u>100%</u>			<u>.1584</u>

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

Since there is a gain in equity's position through the years by the loan being paid off little by little, it is necessary to calculate the credit for “Equity Build-Up”. Assume that the investor plans to hold the property for ten years. Since the mortgage is for 20 years, only a portion of the principal will be paid off and this amount must be discounted, as it won't be received for ten years. From the Table of Loan Balance and Debt Reduction, at the end of ten years for a 20 year mortgage at 14%, the figure is .199108. Consulting the sinking fund tables indicates that the discount factor for 18% and 10 years is .0425.

The credit for Equity Build-Up can now be deducted from the basic rate, thus . . .

$$\begin{array}{rclcl}
 .199108 & & 70\% & & .0425 & = & \underline{.0059} \\
 (\% \text{ of loan paid in 10 yrs.}) & \times & (\text{loan rate}) & \times & (\text{sinking fund 18\% for 10 yrs.}) & & \\
 \text{Resulting Net Rate} & & & & & = & .1525
 \end{array}$$

LAND VALUATION TECHNIQUES

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

An estimate of land value is required in the application of the Cost Approach.

An estimate of land value is required to be deducted, from the total property sales price in order to derive indications of depreciation through market-data analysis. (Depreciation being equal to the difference between the replacement cost new of a structure and the actual price paid in the market place for the structure.)

As land is not a depreciable item, a separate estimate of land value is required for bookkeeping and accounting purposes; likewise, the total capitalization rate applicable to land will differ from the rate applicable to the improvements on the land.

Since land may or may not be used to its highest potential, the value of land may be completely independent of the existing improvements on the land.

Real Estate is valued in terms of its highest and best use. The highest and best use of the land (or site), if vacant and available for use, may be different from the highest and best use of the improved property. This will be true when the improvement is not an appropriate use and yet makes a contribution to total property value in excess of the value of the site. Highest and Best Use (Highest and Most Profitable Use; Optimum Use) is that reasonable and probable use which will support the highest present value as of the date of the appraisal. Alternatively, it is the most profitable likely use to which a property can be put. It may be measured in terms of the present worth of the highest net return that the property can be expected to produce over a stipulated long run period of time. (American Institute of Real Estate Appraisers' Appraisal Terminology Handbook, 1981 edition.)

As appraisers' opinions are based on data derived from the market, it is necessary to study and adapt, if possible, procedures used by those closest to everyday transactions.

COMPARABLE SALES METHOD

The most frequently used method in estimating the value of land is the comparable sales method in which land values are derived from analyzing the selling prices of similar sites. This method is in essence the application of the market data approach to value and all the considerations pertaining thereto are equally applicable here.

The appraiser must select comparable and valid market transactions, and must weigh and give due consideration to all the factors significant to value, adjusting each to the subject property. The comparable sites must be used in the same way as is the subject property, and subjected to the same zoning regulations and restrictions. It is also preferable, whenever possible, to select comparable sales from the same or a similar neighborhood. The major adjustments will be to account for variations in time, location, and physical characteristics to include size, shape, topography, landscaping, access, as well as other factors which may significantly influence the selling price, such as the productivity of farm land.

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

$$\begin{array}{r} \text{Selling Price of Property} \\ - \text{Estimated Depreciated Value of Buildings} \\ \hline = \text{Indication of Land Value} \end{array}$$

In some of these older neighborhoods, vacant lots will exist often as a result of fire or normal deterioration. Since the desirability as a new building site is restricted, value is generally determined by adjoining property owners who have a desire for additional land area.

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

The utility of a site will vary with the frontage, width, depth, and overall area. Similarly, the unit land values should be adjusted to account for differences in size and shape between the comparable and the subject property. Since such an adjustment is generally necessary for each lot, it is beneficial that the appraiser adopts and/or develops standardized procedures for adjusting the lot size and the unit values to account for the variations. It is not uncommon for all lots within a development to market at the same price. Should data indicate this, it is necessary to make alterations or adjustments to maintain this value level. In some cases, a "site value" concept has advantages. Site value tables provide for uniform pricing of standard sized lots within homogenous neighborhoods or subdivisions. Some of the techniques commonly employed are as follows:

Standard lot sizing techniques provide for the adjustment of the frontage, width, and depth of irregular shaped lots to make the units of measurement more

comparable with uniform rectangular lots. Incremental and decremented adjustments can be applied to account for size differences.

Standard Depth Tables provide for the adjustment of front foot unit values to account for variations in depth from a predetermined norm.

Frontage Tables provide for the adjustment of front footage unit values to account for variations in the relative utility value of excessive or insufficient frontage as compared to a predetermined norm.

Acreage or Square Footage Tables provide for the adjustment of unit values to account for variations in the relative utility value of excessive or insufficient land sizes as compared to a predetermined norm.

During the process of adjusting the comparable sales to account for variations between them and the subject property, the appraiser must exercise great care to include all significant factors and to properly consider the impact of each of the factors upon the total value. If done properly, the adjusted selling prices of the comparable properties will establish a range in value in which the value of the subject property will fall. Further analysis of the factors should enable the appraiser to narrow the range down to the value level that is most applicable to the subject property.

THE LAND RESIDUAL TECHNIQUE

In the absence of sufficient market data, income-producing land may be valued by determining the portion of the net income attributable to the land and capitalizing the net income into an indication of value. The procedure is as follows:

1. Determine the highest and best use of the land, which may be either its present use or hypothetical use.
2. Estimate the net income which the property can be expected to yield.
3. Estimate the replacement cost new of the improvements.
4. If the case involves the present use, estimate the proper allowance for depreciation, and deduct that amount from the replacement cost new of the improvements to arrive at an estimate of their depreciated value.
5. Develop appropriate capitalization rates.
6. Calculate the income requirements of the improvements, and deduct the amount from the total net income to derive that portion of the income that can be said to be attributable to the land.

- 7. Capitalize the residual income attributable to the land to an indication of value.

RATIO METHOD

A technique useful for establishing broad indications of land values is a “typical” allocation or ratio method. In this technique, the ratio of the land value to the total value of improved properties is observed in situations where there is good market and/or cost evidence to support both the land values and total values. This market abstracted ratio is then applied to similar properties where the total values are known, but the allocation of values between land and improvements are not known. The ratio is usually expressed as a percentage that represents the portion of the total improved value that is land value, or as a formula:

$$\frac{\text{Total Land Value}}{\text{Total Property Value}} \times 100\% = \% \text{ Land Is of Total Property Value}$$

This technique can be used on most types of improved properties, with important exceptions being farms and recreational facilities, provided that the necessary market and/or cost information is available. In actual practice, available market information limits this technique primarily to residential properties, and to a much lesser extent, commercial and industrial properties such as apartments, offices, shopping centers, and warehouses. The ratio technique cannot give exact indications of land values. It is nevertheless useful, especially when used in conjunction with other techniques of estimating land values because it provides an indication of the reasonableness of the final estimate of land value.

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

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

Market information derived from an active new subdivision

Typical Lot Sale Price (most lots equivalent)				\$15,000
Improved Lot Sales (range)				\$65,000 to \$75,000
Indicated Ratio	$\frac{\$15,000}{75,000}$	To	$\frac{15,000}{65,000}$	X 100% 20% to 23%

Similar subdivision, but 100% developed

Typical Lot Sale Price (most lots equivalent)	Unavailable
Improved Lot Sales (range)	\$85,000 to \$105,000
Broadest Indicated Range of Lot Values (20% x \$85,000 to 23% x \$105,000)	\$17,000 to \$24,150
Narrowest Indicated Range of Lot Values (23% x \$85,000 to 20% x \$105,000)	\$19,550 to \$21,000

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

MASS APPRAISING

In preceding sections, we have outlined the fundamental concepts, principles, and valuation techniques underlying the Appraisal Process. We will now approach the problem at hand . . . the reappraisal of certain specified real property within a total taxing jurisdiction, be it an entire county or any subdivision thereof . . . and to structure a systematic mass appraisal program to effect the appraisal of said properties in such a way as to yield valid, accurate, and equitable property valuations at a reasonable cost dictated by budgetary limitations, and within a time span totally compatible with assessing administration needs.

The key elements of the program are validity, accuracy, equity, economy, and efficiency. To be effective, the program must. . . .

- incorporate the application of proven and professionally acceptable techniques and procedures;
- provide for the compilation of complete and accurate data and the processing of that data into an indication of value approximating the prices actually being paid in the market place as of the effective assessment date;
- provide the necessary standardization measures and quality controls essential to promoting and maintaining uniformity throughout the jurisdiction;
- provide the appropriate production controls necessary to execute each phase of the operation in accordance with a carefully planned budget and work schedule; and –
- provide techniques especially designed to streamline each phase of the operation, eliminating superfluous functions, and reducing the complexities inherent in the Appraisal Process to more simplified but equally effective procedures.

In summary, the objective of an individual appraisal is to arrive at an opinion of value, the key elements being the validity of the approach and the accuracy of the estimate. The objective of a mass appraisal for tax purposes is essentially the same. However, in addition to being valid and accurate, the value of each property must be equitable to that of each other property, and what's more, these valid, accurate, and equitable valuations must be generated as economically and efficiently as possible.

OVERVIEW

The prime objective of mass appraisals for tax purposes is to equalize property values. Not only must the value of one residential property be equalized with another, but it must also be equalized with each agricultural, commercial, and industrial property within the political unit.

The common denominator or the basis for equalization is market value as set forth by N.C.G.S. 105-283. . . . that price which an informed and intelligent person, fully aware of the existence of competing properties and not being compelled to act, is justified in paying for a particular property.

The job of the appraiser is to arrive at a reasonable estimate of that justified price. To accomplish this, the coordination of approaches to the valuation of the various classes of property must be made so that they are related one to another in such a way as to reflect the motives of the prospective purchasers of each type of property.

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

The prospective purchaser of agricultural property will be motivated somewhat differently. The primary interest will be in the productive capabilities of the land. It is reasonable to assume that the purchaser will be familiar, at least in a general way, with the productive capacity of the farm. It might be expected that the prudent investor will have compared one farm's capabilities against another. Accordingly, the appraiser for local tax equalization purposes must rely heavily upon prices being paid for comparable farmland in the community.

The prospective purchaser of commercial property is primarily interested in the potential net return and tax shelter the property will provide. That price which is justified to pay for the property is a measure of the prospects for a net return from the investment. Real estate, as an investment then, must not only compete with other real estate, but also with stocks, bonds, annuities, and other similar investment areas. The commercial appraiser must explore the rental market and compare the income-producing capabilities of one property to another.

The prospective purchaser of industrial property is primarily interested in the overall utility value of the property. Of course, in evaluating the overall utility, individual consideration must be given to the land and each improvement thereon. Industrial buildings are generally of special purpose design, and as such, cannot readily be divorced from the operation for which they were built. As long as the operation remains effective, the building will hold its values; if the operation becomes obsolete, the building likewise becomes obsolete. The upper limit of its value is its replacement cost new, and its present day value is some measure of its present day usefulness in relation to the purpose for which it was originally designed.

Any effective approach to valuations for tax purposes must be patterned in such a way as to reflect the "modus operandi" of buyers in the market place. As indicated above, the motives influencing prospective buyers tend to differ depending upon the type of property involved. It follows that the appraiser's approach to value must differ accordingly.

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

The commercial appraiser will find that since commercial property is not bought and sold as frequently as is residential property, the sales market cannot be readily established. By relying heavily on the income approach to value, the net economic rent that the property is capable of yielding can be determined, and the amount of investment required to effect that net return at a rate commensurate with that normally expected by investors could also be determined. This can only be achieved through a comprehensive study of the income-producing capabilities of comparable properties and an analysis of present-day investment practices.

The industrial appraiser will not be able to rely on the market data approach because of the absence of comparable sales, each sale generally reflecting different circumstances and conditions. Also, it is not possible to rely upon the income approach, again because of the absence of comparable investments, and because of the inability to accurately determine the contribution of each unit of production to the overall income produced. Therefore, by relying heavily on the cost approach to value, a determination must be

made of the upper limit or replacement cost new of each improvement and the subsequent loss of value resulting overall from physical, functional and economic factors.

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

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

Each property must be given individual treatment, but the treatment must be uniform and standardized, and essentially no different than that given to any other property. All the factors affecting value must be analyzed and evaluated for each and every property within the entire political unit. It is only by doing this that equalization between properties and between classes of properties can be ultimately affected.

All this, at best, is an oversimplification of the equalization process underlying the entire Mass Appraisal Program. The program itself consists of various operational phases, and its success depends primarily upon the systematic coordination of collecting and recording data, analyzing the data, and processing the data to an indication of value.

SALES RATIO

General Discussion

One of the most used methods of analyzing sales is the sales ratio. Property tax is an ad valorem tax (according to value) and because value is defined as "market" value and

because market value is evaluated by measuring “sales” of properties in the market place, then the quality of a group of assessments may be evaluated by measuring their ratio to the real estate sales from the same geographical area as of the assessments. Assessment/sales ratio study is the comparing of appraised value to sale prices.

The word “ratio” is a statistical term that, when numerically expressed, simplifies the comparison of magnitude of numbers. They are various types of ratios, distinguished by their base of comparison, that is the denominator of the fraction, and they may take the form of fractions, proportions, percentages or rates. Some of the leading types of ratios are the result of comparing a part to its whole, comparing a part to a part within a whole, or comparing one whole to another whole.

The assessor’s office main purpose is to value all properties uniformly and equitably. Therefore, it is incumbent on the appraiser to place property values that represent the current probable selling price or some constant fraction thereof.

One of the most meaningful and useful tools in measuring the quality of the real property appraisal is the ratio study. The measurements (commonly referred to as ratio studies and median assessment levels) can be either in the aggregate or sectional and are found by comparing the value placed on properties which have sold with the amount for which the property actually sold.

Caution should be used when reviewing sales ratio results for the properties that comprise a sales file which does not always constitute a representative sample of the property type (class) population within the County. The calculated results could be biased, even if carefully weighted for some important classes of properties are seldom, if ever, sold.

DATA INVENTORY

Basic to the appraisal process is the collecting and recording of pertinent data. The data will consist of general supporting data, referring to the data required to develop the elements essential to the valuation process; neighborhood data, referring to information regarding pre-delineated neighborhood units; and specific property data, referring to the data compiled for each parcel of property to be processed into an indication of value by the cost, market and/or income approach.

The data must be comprehensive enough to allow for the adequate consideration of all factors that significantly affect property values. In keeping with the economics of a mass appraisal program, it is costly and impractical to collect, maintain, and process data of no or marginal contribution to the desired objectives. The axiom "too much data is better than insufficient data" does not apply. What does apply is the proper amount of data, no more or no less, which is necessary to provide the database necessary to generate the desired output.

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

All data pertaining to the cost of total buildings in place should include the parcel identification number, property address, and date of completion, construction cost, name of builder, source of information, structural characteristics, and other information pertinent to analysis.

Cost information may be recorded on the same form (unassigned property record card) used to record specific property data.

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

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

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

Sales data should be recorded on the same form (assigned property record card) used to record specific property data, and verified during the property-listing phase.

The principal source for obtaining sales data is the County Register of Deeds Office, MLS, Sales Letters, Fee Appraisers and the real estate transfer returns. Other sources may include developers, realtors, lending institutions, and individual owners during the listing phase of the operation.

Income and expense data must be sufficient enough to derive capitalization rates and accurate estimates of net income needed to apply the income approach. Income and expense data should include both general data regarding existing financial attitudes and practices, and specific data regarding the actual incomes and expenses realized by specific properties.

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

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

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

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

Neighborhood data. At the earliest feasible time during the data inventory phase of the operation, and after a thorough consideration of the living environment and economic characteristics of the overall county, or any political sub-division thereof, the appraisal staff should delineate the larger jurisdictions into smaller "neighborhood units," each exhibiting a high degree of homogeneity in residential amenities, land use, economic trends, and housing characteristics such as structural quality, age, and condition. The neighborhood delineation should be outlined on an index (or comparable) map and each assigned an arbitrary Neighborhood Identification Code, which when combined with the

parcel identification numbering system, will serve to uniquely identify it from other neighborhoods.

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

All neighborhood data should be recorded on a specially designed form during the delineation phase. The existing property record card can serve in this capacity as it contains the current data on file.

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

The data should include the parcel identification number, ownership and mailing address, legal description, property address, property classification code, local zoning code, neighborhood identification code, site characteristics, and structural characteristics.

All the data should be recorded on a single, specially-designed property record card customized to meet individual assessing needs. Each card should be designed and formatted in such a way as to accommodate the listing of information and to facilitate data processing. In addition to the property data items noted above, space must be provided for a building sketch, land and building computations, summarization, and memoranda. In keeping with the economy and efficiency of a mass appraisal program, the card should be formatted to minimize writing by including a sufficient amount of site and structural descriptive data that can be checked and/or circled. The descriptive data should be comprehensive enough to be suitable for listing any type of land and improvement data regardless of class, with the possible exception of large industrial, institutional, and utility complexes that require lengthy descriptions. In these cases, it will generally be necessary to use a specially- designed supplemental property record document, keyed and indexed to the corresponding property record card. The property record card should be made a permanent part of the assessing system, and used not only

in conjunction with the revaluation, but also to update the property records for subsequent assessments.

The specific property data should be compiled from existing assessing records and field inspections. The parcel identification number, ownership, mailing address, and legal description may be obtained from existing tax rolls. Property classification codes may also be obtained from existing tax rolls (whenever available) and verified in the field. Local zoning codes may be obtained from existing zoning maps. Neighborhood identification codes may be obtained from the neighborhood delineation maps. Lot sizes and acreage may be obtained from existing tax maps. The property address, and the site and structural characteristics may be obtained by making a physical inspection of each property.

In transferring lot sizes from the tax maps to the property record cards, the personnel performing the tasks must be specially trained in the use of standardized lot sizing techniques and depth tables, may be used, which are necessary to adjust irregular shaped lots and abnormal depths to account for variations from predetermined norms. In regard to acreage, the total acreage may be transferred, but the acreage breakdowns required for the valuation of agricultural, residential, forestry, commercial, and industrial properties must be obtained in the field from the property owner and verified by personal observation and aerial photographs, if available.

Field inspections or the listing of new construction must be conducted by the appraiser or qualified data collectors under the close supervision of the appraisal staff. During this phase of the operation, the lister must visit each property. In the course of the inspection, the following procedures must be adhered to.

Identification of the property.

View the property classification and zoning codes.

Recording the property address.

If possible interviewing the occupant of the building and recording all pertinent data.

Interior inspection of the building when requested by the property owner or when permissible.

Measuring and inspecting the exterior of the building, as well as all other improvements on the property, and recording the story height, and the dimensions and/or size of each.

Recording a sketch of the principal building(s), consisting of a plan view showing the main portion of the structure along with any significant attached exterior features, such as porches, etc. All components must be identified and the exterior dimensions shown for each.

Selection of and recording the proper quality grade of the improvement.

Selection of and recording the proper adjustments for all field priced items.

Reviewing the property record card for completeness and accuracy.

After the field inspection is completed, the property record cards must be submitted to clerical personnel to review the cards for completeness, calculate the areas, and make any necessary mathematical extensions.

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

PROCESSING THE DATA

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

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

After establishing the appropriate standards and norms, it remains to analyze the specific data compiled for each property by giving due consideration to the factors influencing the value of that particular property as compared to another, and then to process the data into an indication of value by employing the techniques described in the section of the manual dealing with the application of the traditional approaches to value.

Any one, or all three of the approaches, if applied properly, should lead to an indication of market value; of primary concern is applying the approaches on an equitable basis. This will require the coordinated effort of a number of individual appraisers, each appraiser acting as a member of a team, with the team effort directed toward a valid, accurate and equitable appraisal of each property within the political unit. Each property must be physically reviewed, during which time the following procedures must be adhered to.

- verification of the characteristics recorded on the property record card.
- certification that the proper schedules and cost tables were used in computing the replacement cost of each building and structure.
- determination of the proper quality grade and design factor to be applied to each building to account for variations from the base specifications.
- making a judgment of the overall condition, desirability, and usefulness of each improvement in order to arrive at a sound allowance for depreciation.
- capitalization of net income capabilities into an indication of value in order to determine the loss of value attributable to functional and economic obsolescence.
- addition of the depreciated value of all improvements to the land value, and reviewing the total property value in relation to the value of comparable properties.

At the completion of the review phase, the property record cards must be, once again, submitted to clerical personnel for final mathematical calculations and extensions, and a final check for completeness and accuracy.

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

To perform the study, it is necessary to take a representative sampling of recent valid sales and compute the appraisal-to-sale ratio for each of the sales. If the sample is representative, the computed median appraisal-to-sale ratio will give an indication of how close the appraisals within each district approximates the market value. This is providing, of course, that the sales included represent true market transactions. It is then necessary to determine the deviation of each individual appraisal-to-sale ratio from the median ratio, and to compute either the average or the standard deviation, which will give an indication of the degree of equity within each individual district. What remains then is to compare the statistical measures across property classes in order to determine those areas, if any, which need to be further investigated, revising the appraisal, if necessary, to attain a satisfactory level of value and equity throughout the entire jurisdiction.

The techniques and procedures set forth herein, if applied skillfully, should yield highly accurate and equitable property valuations, and should provide a sound property tax base. It should be noted, however, that no program, regardless of how skillfully administered, can ever be expected to be error- free. The appraisal must be fine-tuned and this can best be done

by giving the taxpayer an opportunity to question the value placed upon his property and to produce evidence that the value is inaccurate or inequitable. During this time, the significant errors will be brought to light, and taking the proper corrective action will serve to further the objectives of the program. What's important in the final analysis is to use all these measures as well as any other resources available to achieve the highest degree of accuracy and equity possible.

DATA INVENTORY FORMS

Appraisal forms and descriptions are as follows:

- Property Record Card Specifications
- Neighborhood Form
- Land Form
- Operating Statement (I & E)
- Personal and Real Guide

(Forms are attached below)

Schedule of Values

Chatham County 2017

Parcel ID _____ Property Loc. _____ M.H. # _____ AVLF _____ AVLZ _____

Main Area Type MA		Actual Age	Story	Sketch
12W Condo Frame	30M Manufact. Masonry	Quality Grade	GDU	
12M Condo Masonry	30S Manufact. Single	Percent Complete	%	
12C Condo Mas/Fr	30P Personal Man.	BedRm	Baths	Tot Rm
18W Duplex Frame	37W Single Fam. Frame	House Style		
18M Duplex Masonry	37M Single Fam. Mas	01 Bi-Level	16 Log Home	
18C Duplex Mas/Fr	37C Single Fam. Mas/Fr	02 Bungalow	17 Manufactured	
30W Manufact. Frame		03 Cabin	18 Modular	
Exterior Walls EW		04 Cape Cod	19 Patio Home	
01 Brick	08 Aluminum/Vinyl	05 Classical	20 Ranch	
02 Stone	09 Metal	06 Colonial	21 English	
03 Concrete Block	10 Precast Panel	07 Condo	22 Split Level	
04 Stucco	11 Log	08 Contemporary	23 Terrace (Bunker)	
05 Wood Panel	12 Asphalt Roll	09 Convent (pre ww2)	24 Townhouse	
06 Wood Siding	13 Masonry/Frame	10 Conventional	25 Victorian	
07 Asbestos		11 Cottage	26 "A" Frame	
Heating/Air Conditioning	AR	12 Custom	27 French Style	
01 No Heat	06 Unit Heat	13 Duplex/Triplex	28 Spanish Style	
02 Fir/Wall Furnace	07 Pack. Heat/Cooling	14 Enclosed S/W	29 Other	
03 Rad/Elect/Basebrd	08 Heat Pump	15 Garage Apartment	30 Oriental	
04 Radiant/Water	09 Cooling W/Ducts	Foundation FN		
05 Forced Hot Air	10 Manufact home A/C	01 Earth	04 Perimeter Footing	
Plumbing (8 fixtures)	PL	02 Pier/Posr	05 Metal/Vinyl Skirting	
Full Bath	1/2 Bath	03 Continuous Slab	BG Number Cars	
Add Fix	Total	Basement BA	Square Feet	% MA
Fireplace FP		U Unfinished	Square Feet	% MA
02 Wood Stove Flue	06 2 Story Single	F Finished	Square Feet	% MA
03 Prefab 1 Story	07 2 Story Double	R Rec. Area	Square Feet	% MA
04 1 Story Single	08 Prefab 2 Story	UW Unfin/wkout	Square Feet	% MA
05 1 Story Double	09 Manufactured Home	FW Fin/wkout	Square Feet	% MA
Miscellaneous Structures		Size	QG	Year
MS Code	Description			Dep.
01 MS				
02 MS				
03 MS				
04 MS				
05 MS				
06 MS				
07 MS				
08 MS				
09 MS				
Comments				

DATE 10/03/16
 TIME 10:42:05
 USER KAREN

CHATHAM CO TAX DEPARTMENT
 PROPERTY CARD
 FOR YEAR 2017

PAGE 1
 PROG# AS2006

LABARE DARCY L
 WELCH DOUGLAS
 310 DANBURY CT

PARCEL I.D. 0084489
 LOCATION 310 DANBURY CT
 DEED YEAR/BOOK/PAGE 2008 1399 0457
 PLAT BOOK/PAGE 2006 0313
 LEGAL DESC: LOT 30

PIN 9742 00 87 2146
 PITTSBORO
 ASSESSMENT PLF
 OWNER I.D. 1305546
 DISTRICT 201 PITTSBORO CITY

TOWNSHIP 5 CENTER
 NC 27312- POWELL PLACE

RESIDENTIAL
 NBRHOOD PI 039 POWELL PLACE

MAINTAINED BY KAREN VALUED 5/14/2016 BY KAREN
 VISITED 7/22/2008 BY WS PREV PARCEL 0082650
 PARCEL STATUS ACTIVE

ROUTING#
 CATEGORY REAL PROPERTY

* LAND VALUED BY NEIGHBORHOOD BASE RATE METHOD *

DEED BK/PAGE	SALE DATE	SALES INSTRUMENT	DISQUALIFIED	SALES HISTORY	STAMP AMOUNT	DEED NAME
1399 0457	4/25/2008	WARRANTY DEED		QUALIFIED	189,000	LABARE DARCY L & DOUGLAS WELCH
1296 0484	11/07/2006	WARRANTY DEED		2 OR MORE PARCE	714,000	ARVIDA MID-ATLANTIC HOMES INC
1187 0603	8/25/2006	SPLIT		OTHER		BUILDER RESOURCE & DEVELOPMENT
----- LAND SEGMENTS -----						
LND #	ZONE	STRAT	LAND	AVERAGE	TOT	CURRENT
		TYPE/ CODE	LAND QTY	LAND RATE	ADJ	FMV
1		100 LT TH	1.000	25,000.00	.00	25,000
		TOTAL ACRES	.060		.00	25,000
----- IMPROVEMENT # 1 MAJOR IMPR-M -----						

MAIN FIN AREA 1,584.00 ACT/EFF YR/AGE 2007 2007 10 VISITED 8/07/2015 BY BLB
 STRAT 100 DESCR PT CONVENTIONAL MAINTAINED 2/11/2016 BY KAREN
 LOCATION # 310 DANBURY CT

COMPONENT	TYPE/ CODE/ DESC	PCT	UNITS	RATE	STR#	STR%	SI Z%	HGT%	PER%	CDS%	COST	%CMPL
AC 06	COVERED PORCH	100	108.00	28.00		100.00	100.00				3,024	
AC 12	FRAME DECK	100	168.00	16.30		100.00	100.00				2,738	
AC 15	FRAME/METAL STORAGE	100	32.00	26.15		100.00	106.00				887	
MA 37W	SINGLE FAMILY UNIT W	100	792.00	90.05	2.00	65.00	109.54				78,122	
MA 37W	(UPPER FLOORS)	100	792.00	90.05	2.00	65.00	109.54				50,779	
EW 06	WOOD SIDING	100	124.00								0	
- FP 03	PREFABRICATED	0	1.00	1800.00							1,800	
- HC 07	PACKAGED HEAT/COOL	0	792.00	3.00			109.54				2,602	
- PL 02	NUMBER OF FIXTURES	0	2.00	1050.00							2,100	

RON... PCT COMPLETE 100 x
 QUAL... QUALITY GRADE C+10 110.00 x
 DEPR... DEPRECIATION TO 14 Y 3.00 - 4,687 T
 --FMV... MR PI 039 POWELL PLACE 159,150

DATE 10/03/16
TIME 10:42:05
USER KAREN

CHATHAM CO TAX DEPARTMENT
PROPERTY CARD
FOR YEAR 2017

PAGE 3
PROG# AS2006

LABARE DARCY L
DB 1399/457; JTW COMMON LAW RI GHT OF SURVIVORSHI P
SEE: NON-WD 1386/221

PIN... 9742 00 87 2146

Schedule of Values

Chatham County 2017

NEIGHBORHOOD DATA FORM

CHATHAM COUNTY NORTH CAROLINA

02 NEIGHBORHOOD ID

IDENTIFICATION & REFERENCE						MEMORANDUM			
11	AREA NAME								
12	TAXING DISTRICT				13	NO.			
14	SCHOOL DISTRICT				15	NO.			
16	FIRE DISTRICT				17	NO.			
BOUNDARIES				CODES		DELINEATION CODES			
21	NORTH				22		1. PHYSICAL BARRIERS 2. INCOME LEVEL CHANGE 3. VALUE RANGE CHANGE 4. USE OF LAND CHANGE		
23	EAST				24				
25	SOUTH				26				
27	WEST				28				
CHARACTERISTICS									
31	TYPE					35	DEMAND/SUPPLY		
32	PREDOMINANT LAND USE					36	DENSITY		
33	RATE IN LIFE CYCLE					37	RATE OF TURNOVER		
34	NEIGHBORHOOD LIFE CYCLE					38	TYPICAL LAND SIZE		
PREDOMINANT IMPROVEMENT TYPE									
03	BASE CALP INDEX			04	BASE CDU TABLE		05	NEIGHBORHOOD GROUP	
06	TYPICAL CDU			07	TYPICAL GRADE			TYPICAL GRADE ADJUSTMENT	
09	TYPICAL AGE GROUP (YEARS)				10	TYPE			
PREDOMINANT OCCUPANCY				TYPICAL PROPERTY FACTORS				EST. MARKET VALUE FOR RES. IMPROVED PROP.	
51	OWNER	52	TENANT	61	UTILITIES	62	STREET OR ROAD	71	MINIMUM
53	VACANCY VACANT STRUCTURES					(PREDOMINANT)		72	MAXIMUM
54	CHANGE IN USE							73	MEDIAN
55	PROBABLE NEW USE								
NOTES									
74	ZONING								
75	MAPS								

Schedule of Values

Chatham County 2017

Chatham County North Carolina LAND TYPES AND RATES

Neighborhood _____

Neighborhood Name _____

Acreage = AC Lot = LT Square Ft = SS Site Imp. = SI

LAND TYPE	LAND DESCRIPTION	AC	LT	SS	SI
B	Primary				
B1	Primary/Public Water				
S	Secondary				
S1	Secondary/Public Water				
U	Undeveloped				
R	Residual				
O	Open				
D	Woodland				
W	Waste				
CA	Common Area				
APT	Apartment Site				
WF	Waterfront				
WF1	Waterfront Public Water				
CB	Commercial Primary				
CU	Commercial Undeveloped				
CS	Commercial Secondary				
CR	Commercial Residual				
GC	Golf Course				
IB	Industrial Primary				
IU	Industrial Undeveloped				
IS	Industrial Secondary				
IR	Industrial Residual				
EB	Exempt Primary				
EU	Exempt Undeveloped				
ES	Exempt Secondary				
ER	Exempt Residual				
FP	Flood Plain				
WS	Well/Septic				
CS	County Water/Septic				
WPS	Well/County Sewer				

OPERATING STATEMENT (I&E)

The Operating Statement (I&E) is designed to collect and analyze income and expense information on income producing properties. With this information, the appraiser is able to estimate value through capitalization of income. The Operating Statement is divided into four major categories: Market Data, Cost Data, Remodeling Data, and Income and Expense Data. The Income and Expense area of the statement is divided into three specialized areas: Apartments, General Commercial (retail, warehousing, industry), and Office Buildings. The purpose of the specific income and expense areas is to allow the property owner/manager space to enter applicable income, expense, and amenity data.

MARKET DATA

Space is provided to enter any sales information for both vacant and improved parcels. In addition, space is provided to enter the value of any personal property, inventories, or licenses that may have been included in the purchase price. Also, space is provided to enter the percent of mortgage, mortgage term, and interest rate.

COST DATA

Space is provided to enter any construction cost information that is available concerning the subject property. When possible, sizes of additions, paving, etc., should be entered under the comments area.

REMODELING DATA

Space is provided to enter the cost and a description of significant remodeling that has been associated with the building, the year of the remodeling, and whether the cost was attributable to the owner or a tenant.

APARTMENTS - OPERATING STATEMENT

Space is provided to enter a detailed current quoted rent per month by unit type. In instances where rents are computed on a square foot basis, space is provided to note the total apartment complex rentable area.

Project amenities and unit built-ins should be noted as to what is included/available in the apartment complex. The owner expense statement includes areas to enter what is paid by the owner and the costs associated for a two year period. The occupancy percentage should be entered in the space provided. Space is also provided to enter the number of garage/carport spaces available and the monthly rental charge, if applicable.

GENERAL RETAIL, WAREHOUSING, INDUSTRIAL, OTHER- OPERATING STATEMENT

This area is designed to enter income and expense amounts on general retail (retail sales), small industrial, and warehouse type facilities. Space is provided to enter the tenants, floor level, lease term, and floor area of the lease.

Expenses are broken down into the general areas of insurance, taxes, maintenance, and utilities. Actual expense should be entered when available.

OFFICE BUILDING - OPERATING STATEMENT

This area of the operating statement is to enter the applicable income and expense information for office buildings. Space is provided to enter the building total gross area, net rentable area, and lease terms, i.e., on a total gross or net rentable area. The amount of retail area should be entered together with the current occupancy rate. The income statement is designed to quote rent per square foot, based on floor level and whether escalation of rental clause is included. The expense area is broken down into three major categories: insurance and taxes, building maintenance, and utilities. Actual expense should be entered by category if available.



Return this form by email or mail to:
 Attn: Pearson Appraisal Service
 P.O. Box 908
 Pittsboro, NC 27312
 919.542.8298
tax.revaluation@chathamnc.org

PEARSON
APPRAISAL SERVICES
INCORPORATED

Fred W. Pearson, Assessor
 P.O. Box 36404
 Richmond, VA 23235
 888-573-2776

- «MLNAM»
- «MFNAM»
- «MADD1»
- «MADD2»
- «MCITY», «MSTATE» «MZIP5»-«MZIP4»

Record Number(s): «MRECNO»

PROPERTY ADDRESS: «MHSE»

Chatham County is in the process of collecting information to be used for the 2017 reassessment effective January 1, 2017. Pursuant to the requirements of the laws of this state, this office is required to review for assessment purposes all properties, and estimate market values. As part of these requirements we must consider a fair and reasonable capitalization of the income attributable to income producing properties. As an owner of income producing property you are aware of the impact that economic factors have on property valuation. In order to arrive at a fair and equitable value of your property please complete this questionnaire and return by October 1, 2016. If the format of this form is not convenient, attach a copy of your operating statement or e-mail to tax.revaluation@chathamnc.org.

This is voluntary and you may be assured the information you supply will be treated in a confidential manner.

Management firm or person completing this form

Name: _____ Phone # _____

MARKET DATA	PURCHASED LAND ONLY FOR \$ _____ IN 20 ____	PURCHASED LAND AND BUILDING FOR \$ _____ IN 20 ____	LAND SIZE _____
	PLEASE INDICATE THE AMOUNT IF ANY, OF THE PURCHASE PRICE PAID FOR CONSIDERATIONS OTHER THAN REAL ESTATE. ITEMS: _____ AMOUNT \$ _____		

CURRENT COST DATA	Complete cost information <i>only</i> if new construction is within the last 2 years.				
	1. All cost should include labor, materials, architectural fees, and the builder's overhead and profit. 2. Building costs should include the structure, and all mechanical features such as electric, plumbing, heating, air conditioning, sprinkler, and elevators. 3. Site improvements refer to features such as site preparation, utility services, and landscaping. 4. If cost includes items not considered real estate, please indicate under comments the items and the costs.				
	COST	YEAR	COST	YEAR	COMMENTS
SITE IMPROVEMENTS					
BUILDINGS					
ADDITIONS TO ORIGINAL BUILDING					
PAVING					
OTHER YARD ITEMS					
TOTAL					

3. VACANCY INFORMATION

Overall vacancy rate for 2015 (if applicable): _____

Overall vacancy rate for 2014: _____

Overall vacancy rate for 2013: _____

RESPONSIBILITIES	
TENANT	OWNER
___	___
___	___
___	___
___	___
___	___
___	___
___	___
___	___
___	___
___	___

4. RESIDENTIAL SPACE FOR LEASE (if applicable)

Leasable Residential Space: (square feet): _____

Monthly Rent: _____

Services provided by landlord and included in rent: _____

ANNUAL EXPENSES LAST 2 YEARS			
ANALYSIS		20____	20____
MANAGEMENT	FEE		
	COMMISSIONS		
	LEGAL AND ACCOUNTING		
GENERAL	PAYROLL TAXES		
	GROUP INSURANCE		
	BUILDING SUPPLIES		
	RUBBISH REMOVAL		
	MISCELLANEOUS		
CLEANING	WAGES		
	SUPPLIES		
	CONTRACT SERVICES		
UTILITIES	ELECTRIC		
	HEATING		
	WATER		
CONSTRUCTION	DECORATING		
	REPAIRS AND MAINTENANCE		
FIXED EXPENSE	INSURANCE		
	REAL ESTATE TAXES		
	OTHER TAXES		
	DEPRECIATION		
	INTEREST		
	LAND RENT		
RESERVES FOR REPLACEMENTS			
TOTAL			

FOR APPRIASERS USE ONLY - INCOME APPROACH	
POTENTIAL GROSS INCOME.....	
LESS VACANCY AND CREDIT LOSS.....	
EFFECTIVE GROSS INCOME.....	
LESS OPERATING EXPENSES.....	
LESS RESERVES FOR REPLACEMENTS.....	
NET INCOME BEFORE CAPITAL RECAPTURE	
INPUTABLE TO LAND _____ @ _____ % →	=
INPUTABLE TO BUILDING _____ @ _____ % →	=
RESIDUAL LAND/BUILDING _____ = _____ % ←	@
INDICATED PROPERTY VALUE _____	
APPRAISED VALUE _____	

**CLASSIFICATIONS OF SELECTED ITEMS
AS REAL OR PERSONAL**

N.C. 105-273. Definitions

(13) "Real property," "real estate," and "land" mean not only the land itself, but also buildings, structures, improvements, and permanent fixtures on the land, and all rights and privileges belonging or in any way appertaining to the property.

(14) "Tangible personal property" means all personal property that is not intangible and that is not permanently affixed to real property.

In general, machinery and equipment used primarily as part of a manufacturing process (process equipment) is taken as Personal Property. Machinery and equipment which is part of the land or building improvement is taken as Real Property.

<u>Item</u>	<u>Real</u>	<u>Personal</u>
Acoustical fire resistant drapes & curtains (commercial/industrial)		XX
Air Conditioning - building air conditioning, for comfort of occupants, built-in	XX	
Air Conditioning - manufacturing / product		XX
Air Conditioning - window units, that used in data processing rooms and in manufacturing processing		XX
Airplanes		XX
Alarm system (security or fire) and wiring		XX
Alarm Systems (Fire) and Wiring - required by code	XX	
Asphalt plants - batch mix, etc., Moveable		XX
ATM - all equipment and self standing booths		XX
Auto exhaust systems - built-in floor or ceiling	XX	
Auto exhaust systems - flexible tube type		XX
Awnings		XX
Balers (paper, cardboard, etc.)		XX
Bank teller counters - service area and related	XX	XX
Bank teller lockers - moveable or built-in		XX
Bar and bar equipment (moveable or built-in)	XX	XX
Bulk Barns	XX	
Billboards		XX
Boats and motors - all		XX
Boiler - for service of building	XX	
Boiler - primarily for process		XX
Bowling alley lanes		XX
Broadcasting equipment		XX

Schedule of Values

Chatham County 2017

C I P (construction in progress) equipment		XX
Cabinets (medical office and laboratories)	XX	
Cabinets (all others)	XX	XX
Cable TV distribution systems		XX
Cable TV equipment and wiring		XX
Cable TV subscriber connections		XX
Camera equipment		XX
Canopies - Fabric, Vinyl or Plastic		XX
Canopies – Generally	XX	
Canopy Lighting	XX	
Car Wash - all equipment, filters and tanks		XX
Carpet – installed	XX	
Catwalks		XX
Cement Plants (movable)		XX
Chairs - all types		XX
Closed circuit TV		XX
Cold storage - built-in cold storage rooms		XX
Cold storage - refrigeration equipment		XX
Compressed air or gas systems (other than building heat)		XX
Computer room a/c		XX
Computer room raised floor		XX
Computers and data lines		XX
Computer scanning equipment		XX
Concrete plant - electronic mixing, conveyors, tanks, etc.		XX
Construction and grading equipment (non-licensed vehicles, etc.)		XX
Control systems - building and equipment		XX
Conveyors and material handling systems		XX
Cooking equipment (restaurant, etc.)		XX
Coolers - walk-in or self standing		XX
Cooling towers - primary use for building	XX	
Cooling towers - primary use in manufacturing		XX
Counters/Reception desk – movable or built-in		XX
Dairy processing plants - all process items		XX
Dance floors		XX
Data processing equipment - all items		XX
Deli equipment		XX
Desks – all		XX
Diagnostic center equipment - moveable or built in		XX
Display cases - moveable or built-in		XX
Dock levelers	XX	
Drapes and curtains, blinds, etc.		XX
Drinking fountains	XX	
Drive-thru windows - all	XX	XX
Drying systems (special heating in process system)		XX

Schedule of Values

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Dumpsters		XX
Dust catchers, control systems, etc.		XX
Electronic control systems (weighting, mixing, etc.)		XX
Elevators / Escalators	XX	
Fans - freestanding		XX
Farm equipment	XX	XX
Fencing - inside		XX
Fencing - outside	XX	
Flagpole		XX
Floors, computer room		XX
Floors – raised, padded, special purpose		XX
Foundations for machinery & equipment		XX
Freight charges		XX
Fuels - not for sale (list as supplies)		XX
Furnaces - steel mill process, etc., foundry		XX
Furniture and fixtures		XX
Gazebos & Pergolas	XX	
Golf course & improvements (drainage / irrigation)	XX	
Grain bins	XX	XX
Grease traps	XX	
Greenhouses (all except glass)		XX
Greenhouses - Glass	XX	
Greenhouses benches, heating systems, etc		XX
Greenhouses – structure if permanently affixed	XX	
Heating systems, process		XX
Hoppers - metal bin type		XX
Hospital systems - oxygen, public address, emergency electric, closed T.V. call system, autoclave, etc.		XX
Hot air balloons		XX
Hotel/Motel televisions & wiring		XX
Humidifiers, process		XX
Incinerators - moveable, metal type		XX
Industrial piping, process		XX
Installation cost		XX
Irrigation equipment		XX
Irrigation equipment – portable		XX
Kiln heating system		XX
Kilns - metal tunnel, moveable		XX
Laboratory equipment		XX
Lagoons / settling ponds	XX	XX
Laundry bins		XX
Law and professional libraries		XX
Leased equipment - lesser or lessee possession		XX
Leasehold improvements (list in detail yearly to determine real or personal)	XX	XX

Schedule of Values

Chatham County 2017

Lifts - other than elevators		XX
Lighting - portable, moveable, special		XX
Lighting - yard lighting	XX	
Machinery and equipment		XX
Medical equipment		XX
Milk handling - milking, cooling, piping, storage		XX
Millwork		XX
Mineral rights	XX	
Mirrors (other than bathroom)		XX
Molds		XX
Mobile home - single wide, double wide, triple wide		XX
Mobile home - single wide, double wide, triple wide – meets definition of G.S. 105-273(13)	XX	
Monitoring systems - building or equipment		XX
Newspaper stands		XX
Night depository		XX
Office equipment - all		XX
Office supplies (list as supplies)		XX
Oil company equipment - pumps, supplies, etc.		XX
Ovens - processing / manufacturing		XX
Overhead conveyor systems		XX
Package and labeling equipment		XX
Paging systems		XX
Painting - interior, commercial	XX	
Paint spray booths		XX
Paving	XX	
Piping systems - process piping		XX
Playground equipment - all		XX
Pneumatic tube systems		XX
Portable buildings (greenhouses, constructions, etc.		XX
Power generator systems (auxiliary emergency, etc.)		XX
Power house or plant		XX
Power transformers - equipment		XX
Public address systems (intercom, music, etc.)		XX
Railroad sidings (other than railroad-owned	XX	
Refrigeration systems - compressors, etc		XX
Repairs - building	XX	
Repairs (Major) - equipment (50% cost)		XX
Restaurant furniture (incl. attached to floor or building)		XX
Restaurant/kitchen equip. - vent hoods, sinks, etc. (commercial)		XX
Returnable containers		XX
Rock crusher		XX
Roll-up doors (inside wall)		XX
Roll-up doors (outside wall)	XX	

Schedule of Values

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Roofing	XX	
Room dividers/partitions – movable or built-in		XX
Rooms - self contained or special purpose (walls, ceiling, floor)		XX
Safes (wall or self-standing)		XX
Sales tax		XX
Satellite dishes (all wiring & installation to TV & equipment		XX
Scale houses (unless portable)	XX	
Scales		XX
Security systems		XX
Screens - drive-in, outdoor	XX	
Screens - movie, indoor		XX
Seats – theater		XX
Service station equipment - pumps, tanks, lifts		XX
Sewer systems	XX	
Shelving		XX
Signs - all types (including billboards, etc.)		XX
Silos	XX	
Sinks – bathroom (includes medical & dental offices)	XX	
Software - capitalized		XX
Solar equipment used to heat & cool building	XX	
Solar equipment photovoltaic & solar thermal		XX
Solar equipment farm electricity generation		XX
Sound projection equipment		XX
Sound systems		XX
Spare parts - list as supplies		XX
Speakers - Built-in or freestanding		XX
Spray booths		XX
Sprinkler system - attached to product storage racks		XX
Sprinkler system - fire protection (building)	XX	
Supplies (office and other)		XX
Swimming pool filtration equipment	XX	
Swimming pool heater equipment		XX
Swimming pools - in ground or indoor	XX	
Switchboard (motel, etc., when not owned by utility		XX
Tanks - permanently affixed structure, etc. (e.g., bulk plant)	XX	XX
Tanks - manufacturing, process, etc		XX
Tanks - service station, underground fuel		XX
Telephone systems and wiring - private		XX
Tents		XX
Theatre screens indoor		XX
Theatre screens outdoor	XX	
Tooling, dies, molds		XX
Towers - microwave and equipment, wiring and foundation		XX
Towers - TV, radio, CATV, two-way radio, wiring and		XX

Schedule of Values**Chatham County 2017**

foundation		
Trailers designed to be pulled behind vehicle		XX
Transportation cost - all		XX
Tunnels - unless part of process system	XX	
Upgrades to equipment		XX
Vacuum system, process		XX
Vault	XX	
Vault door, inner gates, vents and equipment		XX
Vending machines		XX
Vent fans - freestanding		XX
Ventilation systems - general building	XX	
Ventilation systems - manufacturing, process, etc.		XX
Video tapes / movies / reel movies		XX
Wall covering	XX	
Walls - Partitions, moveable and room dividers		XX
Water coolers - all		XX
Water lines - for process, above or below ground		XX
Water systems - residential or general building	XX	XX
Water tanks, process equipment		XX
Water wells if used for irrigation only	XX	
Whirlpool / Jacuzzi / Hot tubs	XX	XX
Wind tunnel equipment		XX
Wiring - power wiring for machinery and equipment		XX

REPLACEMENT COST SCHEDULES & TABLES**ESTIMATING REPLACEMENT COST NEW**

The informed buyer is not justified in paying anything more for a property than what it would cost him to acquire an equally desirable substitute property. Likewise, the upper limit of value of most improvements is the cost of reproducing an equally desirable substitute improvement. It follows, then, that a uniform starting point for an Equalization Program is to determine the Replacement Cost New of each and every improvement.

REPLACEMENT COST

Replacement Cost is the current cost of producing an improvement of equal utility to the subject property; it may or may not be the cost of reproducing a replica property. The distinction being drawn is one between Replacement Cost, which refers to a substitute property of equal utility, as opposed to Reproduction Cost, which refers to a substitute replica property.

The Replacement Cost of an improvement includes the total cost of construction incurred by the builder, whether preliminary to, during the course of, or after completion of its construction. Among these are materials, labor, all sub-contracts, builder's overhead and profit, architectural and engineering fees, consultation fees, survey and permit fees, legal fees, taxes, insurance and the cost of interim financing.

PRICING SCHEDULES

Pricing schedules and related cost tables are included in this manual to assist the appraiser in arriving at accurate estimation of Replacement Cost New. They have been developed by applying unit-in-place costs to the construction of specified hypothetical or model buildings. Application of the schedules involves the selection of the model which most nearly resembles the subject building and adjusting its price to compensate for all significant variations.

Pricing schedules are included for various types of Residential, Agricultural, Institutional, Commercial and Industrial structures.

Cost adjustments for the variations which are most frequently encountered in a particular type building are included. Adjustments for other variations may be made by using either the other Feature Cost Tables or other appropriate schedules

SELECTING THE PROPER QUALITY GRADE

The quality of materials and workmanship is the one most significant variable to be considered in estimating the replacement cost of a structure. Two buildings may be built from the same general plan, each offering exactly the same facilities and with the same specific features, but with widely different costs due entirely to the quality of materials and workmanship used in their construction. For instance, the cost of a dwelling constructed of high quality materials and with the best of workmanship throughout can be more than twice that of one built from the same floor plan, but with inferior materials and workmanship.

The schedules included in this manual have been developed to provide the appraiser with a range of grades comprehensive enough to distinguish all significant variations in the quality of materials and workmanship which may be encountered; the basic specifications for each grade as to the type of facility furnished remain relatively consistent throughout, and the primary criterion for establishing the grade being the overall quality of materials and workmanship.

The majority of buildings erected fall within a definite class of construction, involving the use of average quality of materials with average quality of workmanship. This type of construction being the most common, it can readily be distinguished by the layman as well as the professional appraiser. Consequently, better or inferior quality of construction can be comparatively observed. The quality grading system and pricing schedules in this manual are keyed to this obvious condition; the basic grade being representative of that cost of construction using average quality of materials with average quality workmanship. The principal Quality Grade classifications are as follows:

Grade AAA	Superior Quality
Grade AA	Excellent Quality
Grade A	Very Good Quality
Grade B	Good Quality
Grade C	Average Quality
Grade D	Fair Quality
Grade E	Poor Quality

The seven grades listed above will cover the entire range of construction quality, from the poorest quality to the finest quality.

The general quality specifications for each grade are as follows:

AAA Grade Buildings generally having an exceptional architectural style and design, constructed with the finest quality materials and custom workmanship. Superior quality interior finish, built-in features, deluxe heating system, plumbing and lighting fixtures.

- AA Grade Buildings generally having an outstanding architectural style and design, constructed with the finest quality materials and workmanship. Superior quality interior finish, built-in features, deluxe heating system, plumbing and lighting fixtures.
- A Grade Architecturally attractive buildings constructed with excellent quality materials and workmanship throughout. High quality interior finish and built-in features. Deluxe heating system and very good grade plumbing and lighting fixtures.
- B Grade Buildings constructed with good quality materials and above average workmanship throughout. Moderate architectural treatment. Good quality interior finish and built-in features. Good grade heating, plumbing and lighting fixtures.
- C Grade Buildings constructed with average quality materials and workmanship throughout, conforming to the base specifications used to develop the pricing schedule. Minimal architectural treatment. Average quality interior finish and built-in features. Standard grade heating, plumbing and lighting fixtures.
- D Grade Buildings constructed with economy quality materials and fair workmanship throughout. Void of architectural treatment. Cheap quality interior finish and built-in features. Low grade heating, plumbing and lighting fixtures.
- E Grade Buildings constructed with a very cheap grade of materials, usually “culls” and “seconds” and very poor quality workmanship resulting from unskilled, inexperienced, “do-it-yourself” type labor. Low grade heating, plumbing, and lighting fixtures.

In order to facilitate using this grading system, and again to promote and maintain uniformity in approach, the value relationship of grade to grade as just described has been incorporated into the development of the base specifications relating to each schedule used in the manual.

Note: The appraiser must exercise extreme caution not to confuse the concepts “quality” and “condition” when selecting the proper grade. This is especially applicable to older buildings, wherein a deteriorated condition can have a noticeable effect on their physical appearance. A building will always retain its initial grade of construction, regardless of its existing deteriorated condition. The Quality Grade ultimately selected must reflect that original built-in quality, and the selection of that grade cannot be influenced in any way by the physical condition of the building.

APPLYING THE PROPER GRADE FACTOR

Grading would be a relatively simple process if all buildings were built to conform to the quality grade specifications outlined above. The fact is, however, that this ideal condition does not exist. It is not unusual for any conventional building to be built incorporating construction qualities that fall between the established grade levels. The grading system in this manual has been designed in such a way as to provide the appraiser with a method for accounting for such variations by establishing intermediate grades.

If the Subject building is judged to be of a better or inferior quality than the actual grade levels, a grade factor of plus (+) or minus (-) should be applied, i.e., C+ would be better than a straight "C" Grade, B- poorer than a straight "B" Grade, etc.

There is rarely a clear-cut designation of a specific grade factor. The appraiser will generally select a range, such as C+ to B-, and then weigh the various quality factors exhibited in the construction in order to select the proper factor.

Following the above procedures results in the full range of Quality Grade Factors, examples of these factors are listed below.

AAA 300%	B (+) 135%	D (+) 90%
AA (+) 250%	B 128%	D 85%
AA 225%	B (-) 120%	D (-) 75%
AA (-) 200%	C (+) 110%	E (+) 65%
A (+) 175%	C 100%	E 55%
A 155%	C (-) 95%	E (-) 45%
A (-) 145%		

Note: the quality factor ultimately selected should represent a composite judgment of the overall Quality Grade. Generally, the quality of materials and workmanship is fairly consistent throughout the construction of a specific building; however, since this is not always the case, it is frequently necessary to weight the quality of each major component in order to arrive at the proper "overall" Quality Grade. Equal consideration must also be given to any "Additions" which are constructed of materials and workmanship inconsistent with the quality of the main building.

APPLYING THE PROPER COST AND DESIGN FACTOR

Architectural fees, material quantities, labor efficiency, and other factors influencing total construction costs may vary considerable from one building to another, depending upon its particular design. Two dwellings, for instance, showing no marked difference in size and quality may still show a measurable difference in cost, attributable primarily to a difference in design.

In computing the replacement cost of any building, therefore, it is necessary to adjust the cost to account for any features varying significantly from the base specifications from which the pricing schedules were developed.

The pricing schedules included in this manual, unless otherwise specified, have been developed to reflect perimeter-to-area wall ratios of rectangular shaped buildings, uniform eave lines and roof slopes, overhangs, ceiling heights, and other architectural features most typical of conventional designs.

The adjustment for variations in design must be made by applying a Cost and Design Factor denoting a percentage adjustment of the sub-total replacement cost, i.e., apply a +5% to indicate a 5% increase in the replacement cost, apply a +10% to indicate a 10% increase, etc.

The Cost and Design Factors applicable to dwellings will normally range from 85% to 115%. However, the Cost and Design Factors applicable to special architectural designs may range considerably higher. The selection of the proper Cost and Design Factor is largely a product of the experience and sound judgment of the appraiser, who must have the ability to analyze various construction components and determine the influence of each upon the overall cost.

APPLYING THE PROPER MARKET RATIO

The Market Ratio Adjustment to the dwelling normally ranges from 80% to 120%, but occasionally a higher or lower ratio maybe required. This adjustment becomes necessary after all the adjustments to the cost have been completed accurately but the value still needs to be adjusted to represent the sales market for an area. The sales information for the area will determine the amount of market adjustment required.

PRICING SCHEDULES AND COST TABLES

The Pricing Schedules and Cost Tables in this manual are provided to assist the appraiser in arriving at accurate and uniform valuations. Used properly, they should prove to be an invaluable tool. Quality valuations, however, are not the product of schedules and tables themselves, but rather of the appraiser's ability to use them effectively. In order to bring this about, a thorough understanding of the make-up and the capabilities and limitations of each schedule is essential. The appraiser must know the specifications, from which the base prices were derived, the composition of the prices, and the proper techniques and procedures for applying the prices. What's more important, the appraiser must be able to exercise good common sense and sound judgment in selecting and using them.

It should also be noted that the schedules and tables in the manual have been developed primarily for mass appraisal and tax equalization purposes. They have, therefore, been designed to provide the appraiser with an uncomplicated, fast, and effective method of arriving at an accurate estimate of replacement costs. In order to maintain simplicity in the schedules, techniques, and procedures, it is often necessary to make certain

compromises from a strictly technical and engineering point of view. Extensive effort has been made in developing the schedules to minimize these compromises and limit them to variables that have minimal influence on the final value of the building. The schedules have been designed to reflect actual building costs and practices. Field tests have proven them to be both accurate and reliable, and when applied properly, highly effective in arriving at realistic replacement costs. In the development of the cost approach and tables Marshall Valuation Services cost manual may be used as a cost reference.