

## 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 values of the land, and adding the land value of the land, and adding the land value to the depreciated value of the structures on the land; the resulting equation being...

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

Since estimating the land value is covered in a separate section, the section will address I self to the two remaining element, 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. The both, however, have application in the Cost Approach to value, the different 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 building, 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 method.

The *Quantity-Survey Method* involves a detailed itemized estimate of the quantities of various material 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 purpose and is much too laborious and costly to be effective in every day appraisal work, especially the mass appraisal field. The method, however, does have its place in that is used to development certain unit-in-place costs which can be more readily applied to estimating for appraisal purposes.

The *Unit-in-Pace Method* is employed by establishing in-place cost estimated (including material, labor, overhead and profit) for various structural components. The prices established for the specified components are related to their common units of measurements such as cost per yard of excavation, cost per lineal foot of footing, and cost per square foot of floorcovering.

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. These components part-in-place methods 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 model.

Developed and applied properly, these pricing techniques will assist the appraiser in arriving at valid and accurate estimates of replacement cost new as a given time. 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 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 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 building services.

*Economic Obsolescence* is a condition caused by factors extraneous to the property itself, Such as changes in population characteristics and economics trends, encroachment of inharmonious land uses, excessive taxes, and government 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 degree that the present and future appeal of a property has been diminished by deterioration and obsolescence. Of the three estimates necessary to 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 eliminating the functional deficiency.

Functional and economic obsolescence can be measured by capitalizing the estimated loss in rental due to 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 estimate by deriving the amount of deriving the amount of depreciation recognized by purchasers as evidenced in the prices paid for property in the market place; the loss of values 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).