

MODERN CONSTRUCTION VIZ-A-VIZ PRIMITIVE CONSTRUCTION- A CASE STUDY FOR VIABLE VALUATION

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1. INTRODUCTION:

The formal construction materials are Cement, Fine Sand, Coarse Sand, Coarse Aggregate, Bricks, Steel, Lime, Paint, Varnishes and bitumen etc., which have been always in use even hitherto. Also their mixing products are like cement mortar, cement concrete, Reinforced Cement Concrete, Reinforced Brick Concrete are the same in use in existing scenario. But in present moment construction technologies and their additives for better quality and durability have advanced the structures, by designing & shaping. Also appealing, aesthetically sound, orientation for better natural use of sun light and air, architectural look for better looking space & utilization of space have come in notice in recent times. Landscaping, environmental friendly plantation, floriculture, open space provision and boundary wall with high & showy gate plus carved entrance, have also added value of the structure in modern. Here some logically ideas have been considered to evaluate the structure of old as well as mod structures.

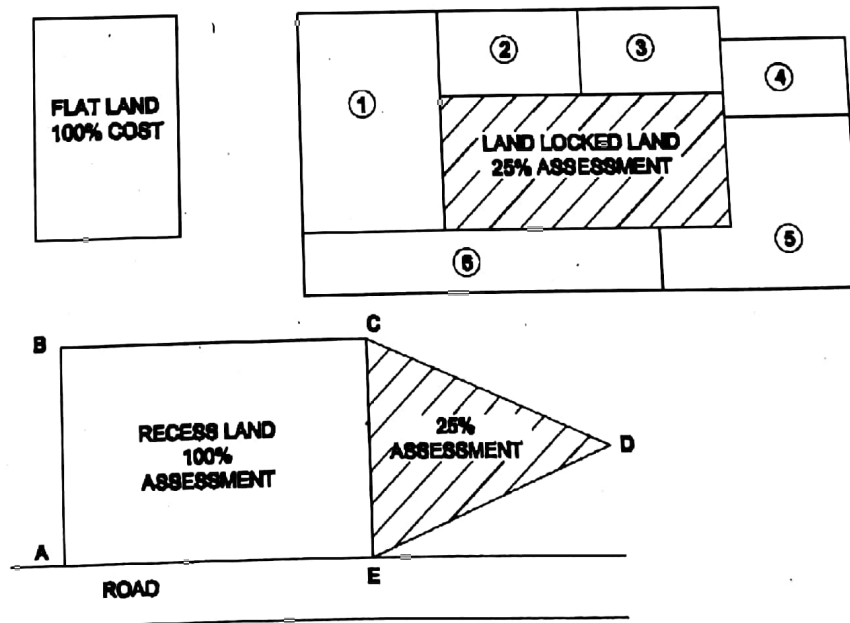
2. THEME:

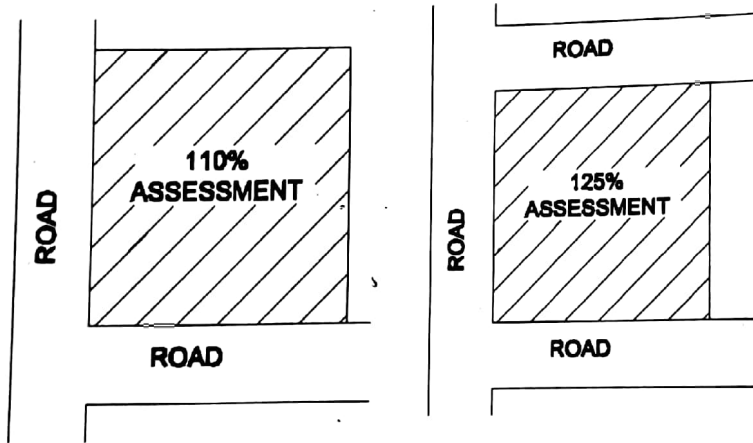
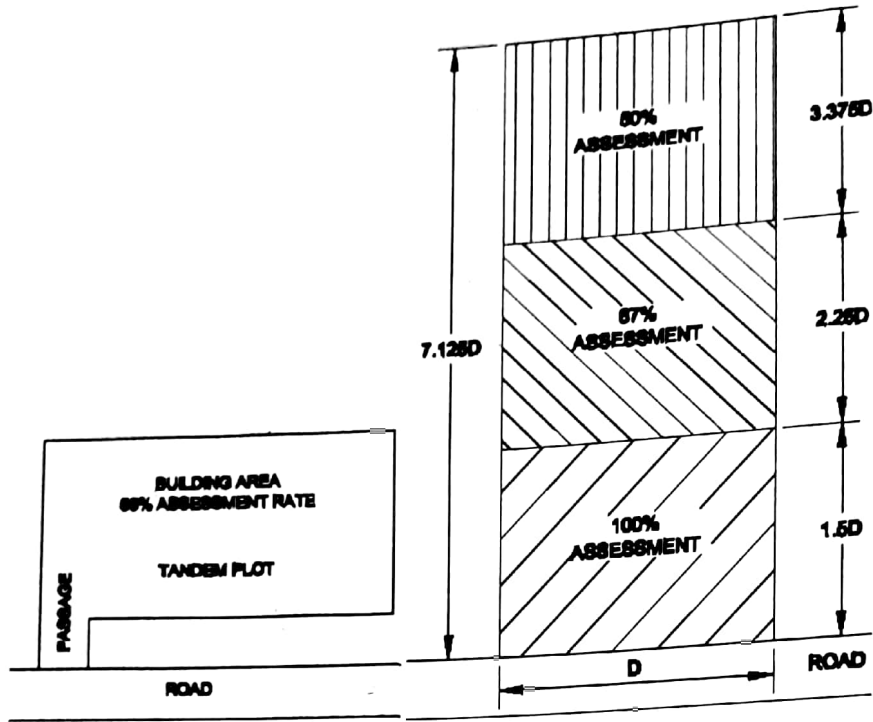
Following points have come in authors notice by which valuation of existing time to the past four decades building structures are being assessed by various reasons incorporating their pros and cons.

A-Extent Shape-n-Size

Plot size should be in proportion of 1:1 to 1:1.5 for cent percent valuation for flat land. However it may go up to 1:7.25, where valuation may reduce subsequently.

In-existing time the development authority and town planners are developing the town and cities by planning, where roads, parking, median, drainage, water supply, plantation and further expansion provisions are considered well. Seeing all aspects like population growth, industrial growth etc., in my opinion, the valuation of land in existing to previous decades is increased by more than 25 times. Valuation of different land shape-n-sizes can be assessed as figured.

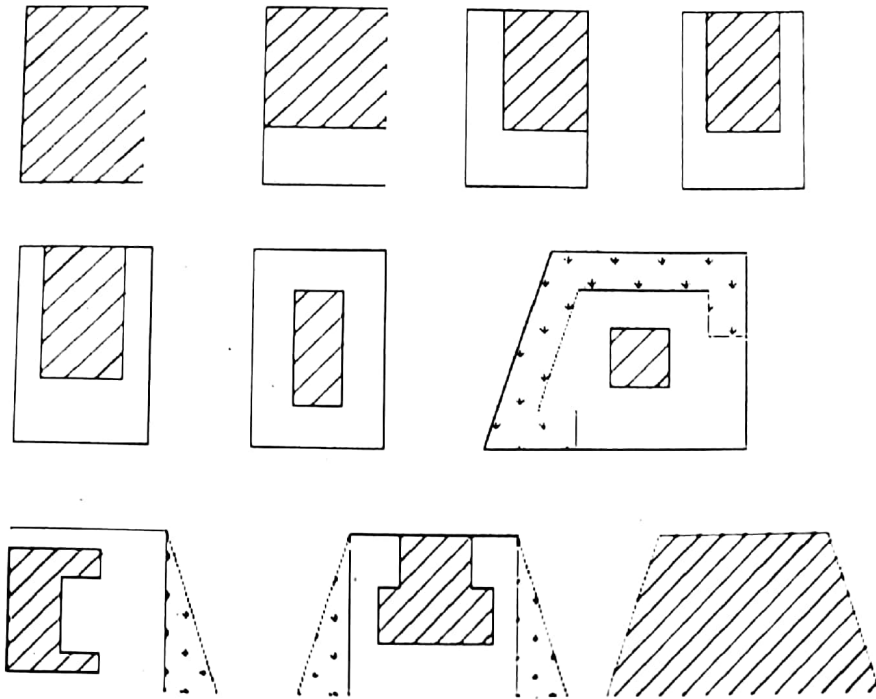




B-PLOT COERVAGE:

In olden time the full extent was usually covered with roof slab and no. of rooms were placed so closely that made more rooms without leaving open space. The thought before this was only to show rooms with little attachment of kitchen, bath, toilet, store etc. At that time the rooms were like stores and people live there-in with poor suffocation condition. They used to provide , open space in the middle of the plot for little ventilation and natural light. Even the irregular shape of extent like sharp edges corners, were covered with slab to use that as room. This system of placing rooms, was considered as worst condition which is unaccepted by mod people.

Presently due to architectural development, the placement of rooms, orientation of constructed portion with natural utility, front-rear-side open even with balcony, suitable ease stair case, ventilators, door-window position and location have improved the value of structure due to gardening as well. Seeing the plot coverage, mod construction is better valued than old one, due to orientation and open space leaving margin. Following figures are showing various aspects of plot coverage.



C-Location of water/sewerage points:

In pasts, water/sewerage points were kept with open pipe lines using G.I. Pipe, socket, elbow, union, tee & cross etc. for water supply and drainage with open rectangular small size channel connecting to kitchen, verandah and bathrooms etc. These were cleaned regularly by sweeper or any one of the dweller, considering no work is good and no any work is bad, cleanliness was only the criteria. Though at that time rats, flies and betel were much more due to open drainage lines, however not such bad condition developed which causes higher level disease. Due to foul smell, vitiation of environment was there, which caused unwanted surroundings. However the good thing was that if seepage exists somewhere, this can be seen through open eyes and remedy of leaking could be done in a easy way by low cost. In present time, water supply and sewerage system are concealed and underground, where seepage through leaking from pipe cannot be seen and becomes difficult to remedy because of breaking of floor as well as wall tiles to change pipes & socket etc. Though concealed and hidden pipe system looks good and walls cum floor seem better and smooth, but during leaking arduous while repairing, is untraceable.

Because in that time the water points like toilets, baths and kitchens were made closer to the boundary and street drain, hence pipe length and its attachments were low costing and seen pipes were remain within these areas, so the seepage exists with only this surroundings not beyond. While existing time water points are compacted with other rooms like bed, drawing, lobby etc are attached with toilet and baths at rear end. Hence this concealed pipe line lengths and its attachment become lengthy, so cost of laying plus material become too much higher, which lead more probability of seepage also. By this long seepage the structure becomes deteriorated and faded. This has reduced the value. An suggestion is to place all water points near the boundary not rear the structure. Seeing this, the valuation of structure after its life more than 30 years is reduced by 20% or more due to great maintenance. Hence old structure on this point has 20% more value than new structure.

D-Square room

The rooms in those times were usually kept L*B by 1*1.5, but now-a-days builders use room ratio by 1:1.1. Using this room ratio, wall length is reduced approximate by 8%, hence construction cost is reduced. Although square size of room is not more usable but structurally safe, because square rooms slab is more stable due to load transferred on all four walls.

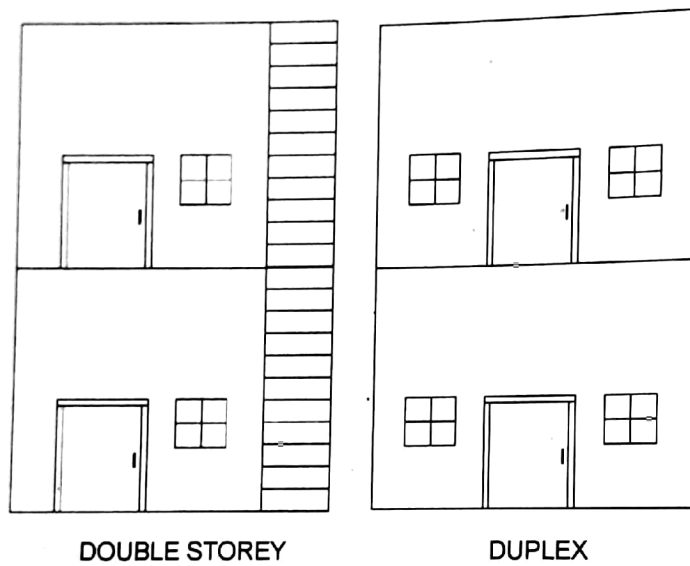
Extra cost with respect to 1:1 and 1:1.1 room size on having different sizes but similar floor area, is as shown here 1:1—0%, 1:1.1—0%, 1:1.2—0.5%, 1:1.3—1%, 1:1.4—1.5%, 1:1.5—2.5%, 1:1.6—2.5%, 1:1.7—4%, 1:1.8—4.5%, 1:1.9—5%, 1:2—6.5% & 1:2.2—8%.

Hence if we use room size in 1:2 in-place of 1:1.1, extra cost will be 6.5% more. In existing time 1:1.1, size rooms are in vogue, hence while evaluating 6.5% minimum cost will be assessed less for new one structure than old one.

E-Double Storey/Duplex

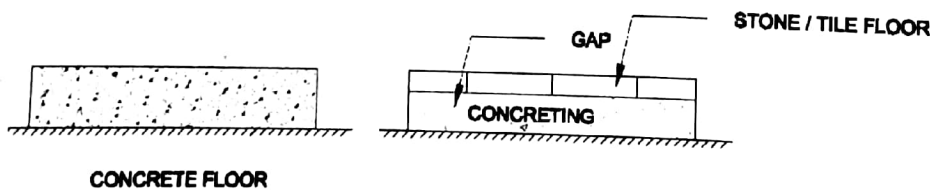
In olden times the structures were remained single storied, but for last decades, the builders/ individuals erect structure double/make duplex. Double storey /duple structures look good and façade seem appealing. Also plinth area as well as floor space get increased. Hence in present scenario when land cost is gradually increasing, population is rapidly expanding and space is being limited, so provision of duplex is quite nice, but cost of first floor construction reduces by 15% to ground floor. Builders have only thought to save cost any how formally by compromising with material quality.

See figure



F-Flooring

In pasts cement concrete floors were used and linen carpet was laid on floor, not necessarily, but to show good floor. These concrete floors were usually solid, smooth, hard, durable, less maintenance and low costing. In these days, people are using marble/kota stone/granite stones thapki(big stone slab) as floor. These stone slabs are placed on plain cement concrete. But it has been seen that these stone slabs are placed on brick ballast and slight cement paste is provided. Due to this, gap remains between stone slab and ballast. Hence a sound while moving on floor occurs like thak-thak, that may cause breaking of stone floor. If it happens, the whole stone thapki is to be changed and new one is placed then grinding on it. It becomes difficult to get same level of other existing stone slab of that room and it becomes mismatched too. While in concrete floor no any sound is created and even if heavy load falls on it, easily be changed by filling fresh concrete there-in it. Hence concrete floors are better solids than stone slab floor by their strength and durability but not in good looking. Here opinion exist with concrete floors. Hence on the basis of durability and strength, concrete are assessed better in valuation than tiles cum stone slab floor. On appearance basis it is vice-versa. See figure as below.

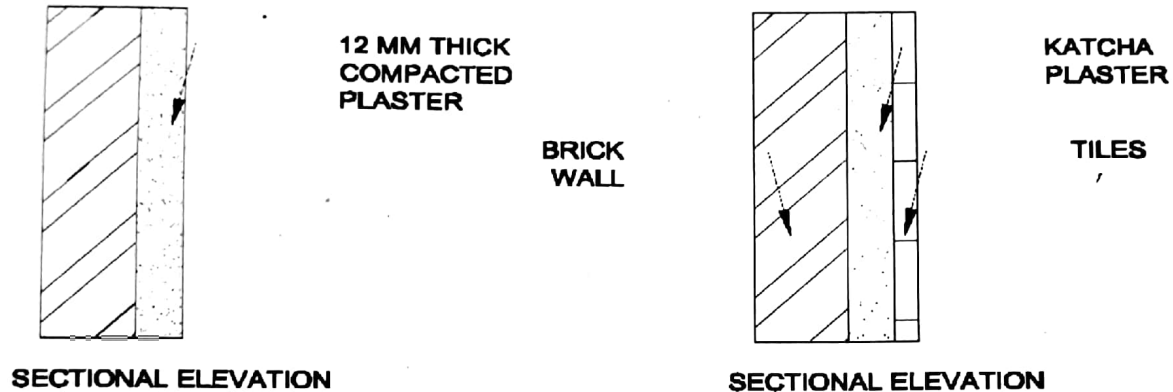


G-Vitreous China Tiling

In past, people used to fresh in bathrooms by filling bucket with water and squat on floor for bathing. That time no water splashed on walls. Hence walls were safe with water and water consumption was less, but now the water supply system is there and use of water frequently in various sectors has increased, so people bathe with shower and water splashed on to the wall, which wets the wall. Hence tiles on walls called dado are placed. While tiling cement in base does not stand uniformly hence air gap remains between wall and tile, so again tile looses on surface and falls-on or while chocking of water line, tiles fall down automatically.

At this stage broken tiles are removed and then new one tile is placed, which is a difficult task, costlier and mismatching of tiles remain possible. Hence valuation will be done on reduced rate. So far the aesthetically point of view is concern, then tilled wall surface will be valued more.

See figure



H-Open lobby/Guest room and Kitchen :

In past, drawing/lobby and kitchen were kept closed with door, but now-a-days concept of open kitchen/lobby with drawing room has been introduced by builders and being accepted by public and is in liking because of looking drawing room bigger to see/ show or organizing any short function, like katha/hawan etc. Also to show the kitchen appliances by its being as modular kitchen. Though concept is good but in this country when thieves and robberies are there, then there is no escape by hiding him selves behind the wall .The thief, in absence of dwellers, will easily pick up the goods and stole easily. Also in construction brick work in foundation as well as in super-n- sub structure is saved. Besides this brick arches of long span are made in-place of RCC lintel to reduce cost of construction. Hence the valuation of mod structure will be valued down than old structure by this point of concern.

I- Thickness Of Walls:

In those times, brick houses were made of 9 inches thick walls, in all sections, but in today!s modera 9 inches walls are made on periphery of building and rests are of 4.5 inch thick, which are susceptible to fail during any slight geo quakes or any seismic activity occurs. This has made structure economical. To save the cost is the legacy of builders. While purchasing such building, valuation may be assumed to be reduced by 10-15% for brick structures.

J:-Walls without Almirah:

In olden times, in-built almirah with brick masonry, were made, which were durable and more usable. But now only straight walls are made without any niche or in-built projection of almirah. This has reduced the cost and due to this, construction goes faster. The benefit goes in favor of the builder. The theme states to use and place ready made steel/wooden almirah of desirable sizes on any place either shifting. While shifting in another house, these

K:-Ceiling Height:

In olden times ceiling height were kept high like 11.5 or 12 feet so that cooling may remain in rooms. But now ceiling height has been reduced and usually kept 10.5 feet, which reduces cost by 3% to 8%. The theme behind this

is that people are using Air Conditioner, so why height should be more. This is developed by builders to get more profit. By doing less height, 10% cost of construction may be reduced. Hence newly developed structure will be devalued by 10-15%.

L:- Ventilators:

In that time ventilators on door/window or any place in room were provided to exit foul/respiratory gases and to keep the room fresh by natural incoming/outgoing air. But now this provision has changed into air tight chambers. In place of ventilators nearby ceiling, these are placed on doors/windows as fanlight fixed with chaukhats head known as transom. It saves the one lintel cost. The theme has evolved by builders for air conditioning and for the economy in construction to set more margin. Not laying of Lintel of RCC saves the cost.

M-Extra points: While evaluating the valuation of structures, so many further points like quality of materials, location, purpose etc. are considered, but taken points are enough to deal with the title.

3. Conclusion:

The study reveals by above observation, that old time structures have some pros for their strength, durability and less maintenance, but cons in their utility, natural ventilation, comfort and look. The result includes for newer structure are better in good façade, looking, space utility, orientation and comfort, while having higher maintenance, moderate durable Brick structure(durable RCC framed str.) and less in strength. However while evaluating past and existing structure, seeing all features it has been assessed and estimated by author, that 25% cost may be taken more for purposeful structure in new era setting aside land ,labor and material cost excluding land cost.

As the land prices are hiking day-by-day and will be apprising because of limited space on earth for living and rapid increasing of population, hence the land valuation will be done accordingly. Existing time costs of structures are being assessed high because of higher land, material and labor cost. In existing days people are biased to earn money any how, for which they compromise with quality of materials, set commission, decide bribing, less supervising, no fear for doing wrong and having approach at higher levels, delay in penalty case and escape from negligence etc. Due to these reasons, the structures life does not remain more. In earlier times people stands with quality and his name. So structures retain more and their values in terms of durability were high. Though technique and working condition are good in these days, materials available are of better quality but environmental degradation has fade the structure.. All monumental and historical structures of past era, made for emotional touch are retaining hitherto. Similarly door, brick, and other materials of old houses are quite hard and durable. Hence old structures valuation goes in favor of more pricing.