

# COST PLANNING FOR RESIDENTIAL BUILDING

Md. Sabir<sup>1</sup>, D. Prem<sup>2</sup>, V. E. Maharaj<sup>3</sup>

Student, Department of Civil Engineering, Vaagdevi College of Engineering, India<sup>1,2</sup>

Assistant Professor, Vaagdevi College of Engineering, India<sup>3</sup>

## ABSTRACT:-

Presently multi day's populace is increments and land required for living is diminishes so need to develop the multistoried building, for the multistoried building it is important to planning and discover the preconstruction cost by utilizing different techniques, due to enormous scale spending plan. In project the executives the cost planning is the significant factor, it is the arrangement of cost estimation and cost control for the building amid the design and advancement.

The point of this examination is to compute the preconstruction cost of residential building by utilizing essential technique for evaluating and characterize the terms utilized in the exploration. The computation of amount required for development of building is finished by utilizing Microsoft Excel with the assistance of auto creep illustrations. In the event that the building illustrations are exact, it gives the more precise cost of project.

Keywords:- Data collection, drawings, planning and estimation, Excel, Autocad, Elemental technique.

## 1.0. INTRODUCTION

Because of the quick development of industrialization it influences on the segment of development and development projects turns out to be increasingly hard to keep the all out cost inside the financial backing, to show it is notable the all out cost of planning of pre-contract development and it is helpful for the acquires the precise outcome. Anyway the estimation of residential loft is significant purpose of flight as a result of blemished auxiliary design information. For the cost estimation required the illustrations, span of every movement just as current market rates material and work cost, and so forth it is helpful while figuring the all out estimate.

## 1.1. BACKGROUND

The Building is utilized for this investigation is residential building name as Kakatiya apartment, it is located in warangal. This project gives all enhancements that a contemporary home purchaser would need to have. Kakatiya apartment is a piece of the urban zone of Hanmakonda. Hanmakonda is associated with adjacent areas by wide streets. Occupants of the territory have simple access to network offices like schools, universities, medical clinics, recreational zones and stops. The Facilities inside the complex are mindfully made.

Kakatiya apartment is a household complex arranged warangal. It offers 548 lofts, covering an absolute zone of 10 sections of land and unit region of 1050 to 1400sq.ft.

## 1.2. OBJECTIVE OF THE PAPER

- ❖ To gathering the subtleties of building illustrations and market rate of material.
- ❖ To gathering the cost information of building development.
- ❖ To process the information of cost into the data of cost of development.
- ❖ To compute the cost of development.

The goal of this exploration is to know the model of estimation dependent on the component of the building or loft, and compute the amount in exceed expectations sheet (utilizing the exceed expectations programming).

## 2.0. COST PLANNING

Cost planning is the technique for finding the cost of project for example how much will be the cost of project. In cost planning center around the length and calendars as it were. For getting the endeavor of account and for discovering conceivable endeavor pay cost planning is significant. The cost planning is significant for the effective project planning, design and development of building and it is valuable for the getting the unmistakable picture of development cost of project. Cost planning comprises of three stages:

- Preliminary Approximate Estimate.
- Cost Plan
- Cost Checking

Planning help to lessens disarrays just as over extra spending plan and deferrals in project. Because of the planning we can decreases the employments of assets. In cost the executives procedure the cost planning is assume a significant job for finding the financial limit, the monetary allowance is discover by estimation utilizing different strategies. Because of the planning we can keep away from the proactive and responsive errors by investigating same project done in past, so the planning is utilized for diminishes timespan just as control the over spending plan.

## 2.1. COST MANAGEMENT

The cost administration is the way toward planning, evaluating, planning and controlling the cost. The project ought to need to finish inside the spending limit and term.

In this cost administration we need to design all exercises we will doing in future methods at the season of development just as we set up the cost arrangement as indicated by the subtleties of illustrations, showcase rates and area of site.

## 2.2. ELEMENTS OF COST THE EXECUTIVES

1. Cost estimation
2. Cost planning
3. Cost checking

### 2.2.1. COST ESTIMATION

Cost estimation is the discovering cost of project and building up the estimates just as estimation for cost is helpful for the assets to finish the project work and exercises.

Cost estimation is determined by utilizing different strategies which are given roar:

- Approximate strategy
- Cubic content strategy
- Unit strategy (basic technique)

### 2.3. PRECISION OF COST ESTIMATION

The precision of estimation is relies upon the subtleties of illustration just as data of market rate. The area of site can be influence on precision. On the off chance that the illustrations are progressively precise that time level of exactness is more.

### 2.4. FOUNDATION FOR COST ESTIMATION

As per authentic built up model of cost estimation it is isolated into the three gatherings. The principal model is begun from the useful components of the buildings. The cost arrangement approach is utilized in England toward the finish of 1950's up to the 1960's. The second model was gotten from the relapse investigation and it has utilized since mid of 1970's [ McCaffer, 1975] [1], The model is begun to create in start of 1980's and it is commonly founded on the Monte Carlo recreation technique [Touran, 1992] [2].

Cost Estimation model is ordered from their attributes for example the cost estimation dependent on amounts; for example the cost estimation like mono-evaluated utilized, for example, square, 3D shape and envelope, asset model which is utilized in the period of development, this model is depends utilitarian components of building just as operational units of building. The second is the untraditional like relapse models, exploratory models and recreation models. [Akintoye and Fitzgerald, 2000] [3], [Ashworth, 1988][4], [ Bledsoe, 1992][5], [Flanagen and Tate , 1997][6], [Mann, 1992] [7], [McCaffer et.al., 1984][8]. [Newton, 1991] [9], [O'Brien, 1994] [10].

The cost of project is expected to estimate inside the precision extend, however there is the biggest issue remaining before cost estimation, it is especially in the underlying stage because of the absence of starter information and greater vulnerabilities as aftereffect of arrangement. [Verlinden et al 2007].

Chan and park additionally contemplated on the cost estimation model they recognized variables which add to cost of project, for ascertain of pre development cost of project model they utilized rule component strategy and survey relative significance of assurance of elements [Chan and park, 2005][11].

Oberlender and Torts both were built up the scoring arrangement of an estimation for estimating effect of the four determinants of exactness on estimates who engaged with arrangement of estimation for example what was the information we think about project, factor considered at the season of getting ready estimation and how was estimation arranged. [Oberlender and Torts, 2001][12]. after that Torst and Oberlender concentrated to build up the model which empowers estimators to assess the precision of the early estimates [Torts and Oberlender, 2003] [13].

### 3.0.METHODOLOGY

In this examination complete cost of project is estimated by utilizing essential technique. For this we were determined by following advances:

- **Project Introduction:** In project presentation it is the portrayal of generally speaking parameter of project just as site area.
- **Scope of project:** The motivation behind the project, subtleties of work, work breakdown structure and give the review on design premise.
- **Collection of structural illustrations:** In this progression we were gathering the structural illustrations for computing the cost of project as per the useful components.
- **Pre-estimation planning:** From this progression we were diminishes the future exertion at the season of development of project for example from past comparative project we can decreases a similar mishap.
- **Elements portrayal and amount departures:** Estimates components of building and figure the amount required subtleties of work on sheet.
- **Summary:** The motivation behind rundown is to express the complete estimated cost of the project, span too.
  - Checking and documentation:
  - Estimate documenting and issues:

### 3.1. PRE-INFORMATION GATHERING

In this phase as indicated by data gathered in pre-information accumulation just estimation is did implies complete cost required for the project is determined.

The estimated cost sheet is determined from PC supported building illustrations for example by estimating the measurements in the PC helped illustrations and it is determined in Excel sheet (Software), by utilizing the essential or useful. The organization in exceed expectations sheet is given howl (figure 1):

Project:	Pride Ashiyana F tower							Contract No:					
Title:	Architectural Finishes-Tower F							Package Trade:					
Date:						##### Sft							
Sr.No.	Item Description	Unit	Nos	L	B	D	Qty	Perimeter	Formwork Qty	Avg Beam Depth	Slab thick	Remarks	
A	Concrete For Substructure												
	Excavation for Foundation												
	PCC						97.74						
	Below Raft						97.74						
	PCC Below RW raft						90.27						
	Grid F12 to D9	Cum	1.00	28.08	4.55	0.15	19.16						
	D9 to C8	Cum	1.00	7.86	4.55	0.15	5.36						
	C7 to D7	Cum	1.00	10.24	4.55	0.15	6.99						
	D8 to D4	Cum	1.00	29.01	4.55	0.15	19.80						
	D5 to D3	Cum	1.00	19.08	4.55	0.15	13.02						
	D3 to A1	Cum	1.00	38.01	4.55	0.15	25.94						
	PCC below Lift Raft						7.46						
	For L1	Cum	2.00	3.33	3.33	0.15	3.33						
	For L2	Cum	2.00	4.14	3.33	0.15	4.14						

Fig 1:- Quantity estimation in exceed expectations group.

After this computation amount passage of substructure component and superstructure component in gathering which is indicates like howls (figure 2)



SR No	Description	Unit	Podium	Area in sft	Constant	Remark
	<b>Substructure</b>					
1	Concrete	Cum	0	0	0.000	Cum/BUA
2	Steel	Kg	0	0	0.000	Kg/BUA
3	Shuttering	Sqm	0	0	0.000	Sqm/BUA
	<b>Superstructure</b>					
4	Concrete	Cum	0	0	0.000	Cum/BUA
5	Steel	MT	0	0	0.000	Kg/BUA
6	Shuttering	Sqm	0	0	0.000	Sqm/BUA
	<b>Overall</b>					
4	Concrete	Cum	0	0	0.000	Cum/BUA
5	Steel	MT	0	0	0.000	Kg/BUA
6	Shuttering	Sqm	0	0	0.000	Sqm/BUA
<b>Superstructure</b>						
4	<b>BBM</b>					
	Sub structure				0	0.000
	Super structure	Sqft	0.00	0	0.000	Super structure
	<b>Total</b>	<b>Sqft</b>	<b>0</b>	<b>0</b>	<b>0.000</b>	<b>overall built up area</b>
5	<b>Internal plaster</b>					
	Sub structure				0	0.000
	Super structure	Sqm	-	0	0.000	Super structure
	<b>Total</b>	<b>Sqm</b>	<b>0</b>	<b>0</b>	<b>0.000</b>	<b>overall built up area</b>
6	<b>External plaster</b>					
	Sub structure	Sqm			0	0.000
	Super structure	Sqm	-	0	0.000	Super structure
	<b>Total</b>	<b>Sqm</b>	<b>0</b>	<b>0</b>	<b>0.000</b>	<b>overall built up area</b>

Fig 2:- Elemental computations for substructure and superstructure

At long last as indicated by the natural cost estimation all out cost of project is spoken to as cost "per square feet" on attractive territory, in rate and aggregate sum required, given as like. (figure.3)

SR.NO	ELEMENT / ITEM	TOTAL AMOUNT	COST PER SQFT ON SALEABLE AREA	PERCENTAGE
1	PROJECT WORKS			
A	GENERAL WORK-EXCAVATION & ALLIED WORKS	-	-	0%
B	RCC STRUCTURE WORKS	-	-	0%
C	ARCHITECTURAL WORKS	-	-	0%
D	MEP	-	-	0%
E	BUILDING AMENITIES	-	-	0%
F	INFRA & EXTERNAL DEVELOPMENT	-	-	0%
G	LANDSCAPE- SOFTSCAPE & HARDCAPE	-	-	0.0%
H	PROJECT PRELIMINARIES	-	-	0%
J	SOFT COST AND OTHER EXPENCES	-	-	0%
K	CONTINGENCIES & ESCALATION & OTHER SOFT COST including TAXES & CESS	-	-	0%
	<b>GRAND TOTAL</b>	<b>-</b>	<b>-</b>	<b>0%</b>

Fig 3:- Elemental cost required for project in rate.

Graphical portrayal for above component is given cry as an example:

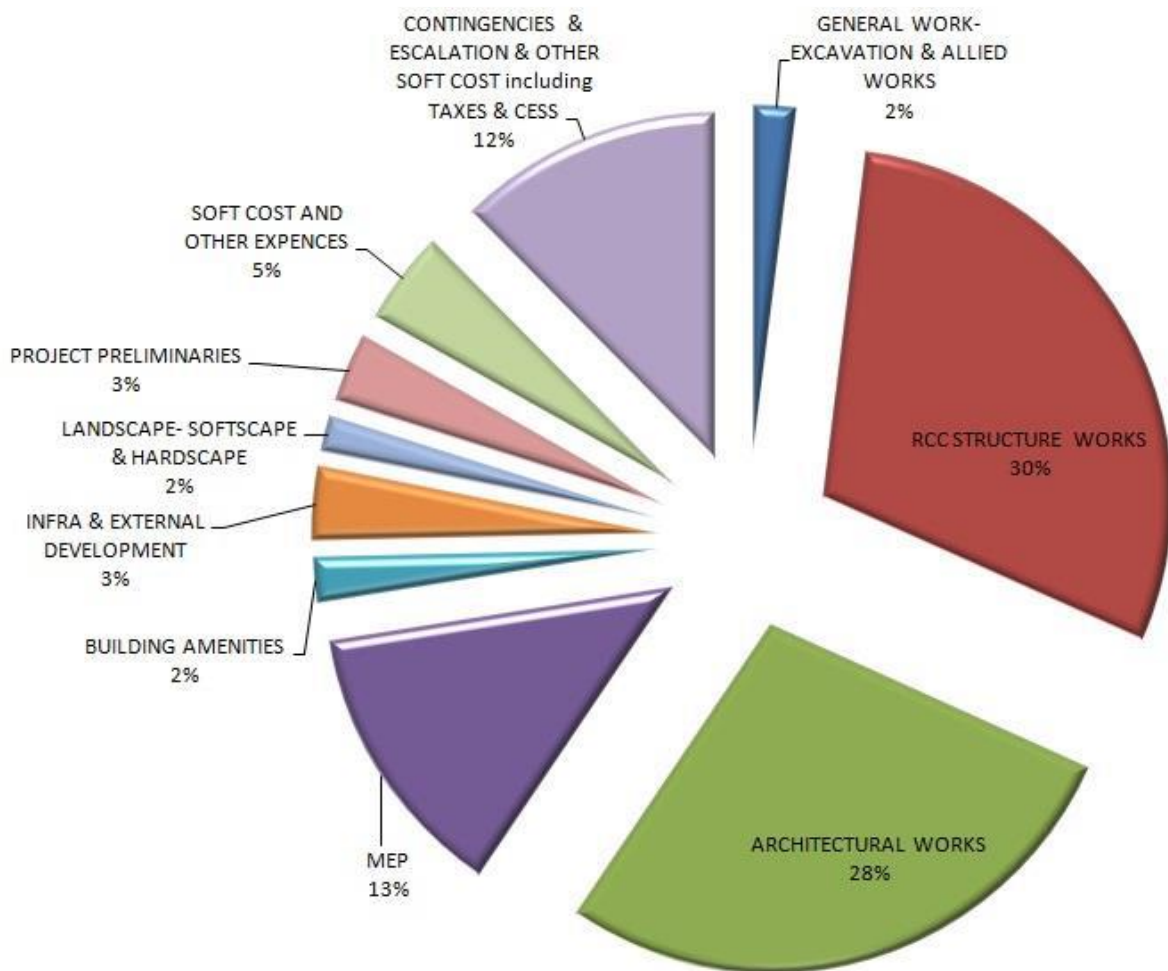


Fig 4:- Graphical portrayals for natural estimation in rate.

#### 4.0. CONCLUSION

This exploration project of residential building is closed according to planning, estimation. Complete cost of project can be estimated in possibility, even in the event that knowing the development region that time it's anything but difficult to estimate.

According to arranged:

- Project duration=455days
- Arranged spending plan of project=555,972,573
- In the wake of refreshing everyday advancement report up to twelfth February 2018
- Unique duration=550 days
- Real cost=535,923,562 the project is finished

From above proclamation we presumed that project is made inside the financial limit and inside the span due to the precise arranging and booking and it improves the nature of development additionally, Due to the basic estimation it simple to estimate the all out expense of project.

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