Practical Approach of Costing in Construction Industry

Presented By

CMA Manish Kandpal

&

CMA Mahesh Giri

Partner - M/s. MM & Associates, Cost Accountants
+91 98733 19834/9711697891
Email id: manishkandpal2009@yahoo.in

Transaction of Real Estate Developers and Builders

- Land development.
- Construction of residential and commercial units.
- Redevelopment of existing building and structure.etc.

Project Cost

Cost of land & Development Rights

- Cost of Land
- Registration charges
- Stamp duty
- Cost of development rights Etc.

Borrowing Cost

- Incurred for the specific project
- Incurred for common Etc.

Construction and Development Cost

- Incurred for the specific project
- Incurred for common or general Etc.

Construction & Development Cost Specific to the Project

- Land cost
- Site labor cost
- Cost of material
- Depreciation of plant and equipment used in the site
- Cost of moving plant- when one material or equipment move one project to another site of project.
- Cost of hiring plant & machinery
- Cost of design
- Guarantee and warranty cost etc.

Construction Cost Common in Nature and Attributable to the Projects

- Insurance
- Cost of technical assistance not directly related to the specific project
- Construction and development overheads
- Borrowing cost

Cost Not Considered as Construction Cost

- General administration cost
- Selling cost
- Research and development cost
- Depreciation of idle plant and equipment
- Cost of unconsumed material
- Advance payment to sub contractor
- Cost of material which is delivered to the site for future activity.

Types of Overheads

<u>Construction /Production Overhead</u>: Construction overhead is also known as site overhead, expenses incurred for construction activity and in nature of indirect cost are called construction overhead.

For Example:-

- Salary of supervisor at site
- Expenses incurred for security services
- Travelling and conveyance expense incurred in the site

Types of Overheads

Administrative Overhead: Expenses incurred for general management of an organization, these are in the nature of indirect cost are termed as administrative overhead.

For Example:-

- Salary of employees in the corporate office
- Auditors remuneration
- Directors remuneration
- Rate and taxes
- Rent of office other than site
- Depreciation of fixed assets in the office other than site Etc.

Types of Overheads

<u>Selling & Distribution Overhead:</u> Expense incurred in relation to selling or promoting business are called selling and distribution overhead.

For Example:-

- Salary of employees in the marketing and business promotion department
- Advertisement
- Travelling expense in relation to marketing
- Depreciation of vehicles used in the marketing etc.

Allocation/ Apportionment/ Absorption of Overheads

- **Allocation:** An item of expense which can be directly related to a cost centre. For example. Depreciation of a particular machine.

- **Apportionment:** Apportionment of overhead is distribution of overheads to more than one cost centre on some equitable basis.

- **Absorption:** Absorption of overheads is charging of overheads from cost centres to product or services by means of absorption rate for each cost centre.

Application of AS 9

Following conditions need to satisfy to identify the completion of revenue recognition process.

- The seller has transferred to the buyer all significant risks and rewards of ownership and the seller retain no effective control with ownership.
- The seller has handed over possession of the real estate unit.
- No significant uncertainty exists regarding amount of consideration.
- It is not unreasonable to expect ultimate collection of revenue from buyers.

Application of % Completion Method

Where to apply:

✓The duration of such project is beyond 12 months

✓Most features of the projects are common to the construction contract

✓The construction activities form a significant proportion of the project activity.

Conditions to apply:

- ✓ Total project revenue can be estimated reliably.
- ✓ The probable economic benefits associated with the project will flow to the enterprises.
- ✓ The cost to complete the project and cost up to stage of completion at the reporting date can be estimated reliably.
- ✓ The project cost attributable to the project can be identified and measured reliably for the purpose of comparison with prior estimates.
- ✓ All the approvals required for commencement of the project activity have been obtained.
  - Environmental and other clearance
  - Approvals of plans and design
  - Title to land and other rights to construction
  - Change in land use

Types of Construction Work

- Public Engineering
- Construction Engineering
- Carpentry
- Plasterwork
- Construction/Concrete Work
- Stone Work
- Roof Work
- Electrical Work
- Piping Work
- Tile/Brick/Block Work
- Steel Construction Work
- Steel Reinforcement Work
- Paving Work
- Dredging Work

Types of Construction Work

- Sheet Metal Work
- Glass Work
- Coating Work
- Waterproofing Work
- Interior Finishing
- Machinery Installation
- Thermal Insulation Work
- Telecommunication Work
- Landscape Gardening
- Well Drilling Work
- Fitting Work
- Water Facilities Work
- Firefighting Facilities Work
- Waste Facilities Work

Causes of High Cost in Construction Site

Cost of Material

Procurement process:-

1) Buying material of wrong specification
2) Buying more than the actual requirement
3) Untimely buying of short life material
4) Improper and unnecessary handling of material

Storage:-

1) Damages and breakages during handling
2) Deterioration due to incorrect storage
3) Incorrect maintenance
4) Losses due to fire, theft etc.
5) Climate issue

Utilization :-

1) Pre- work preparation and coordination
2) Improper accounting and poor storekeeping
3) Long storage of material at the place of work
4) Over issue from the stores for the project site
5) Failure to issue unused surplus material to the store

Causes of High Cost in Construction Site

Cost of Labor

Labor is a significant factor in the cost of building and labor productivity achieved at the site for a given work provides measure of the laborer's efficiency and effectiveness.

Total Time employed at work = Time productive on work + Time unproductive on work

Time productive on work can be wasted by following reasons:

- Idle waiting
- Unnecessary travelling
- Late starting
- Early quitting
- Unscheduled breaks
- Delay in receiving material
- Delay in work instructions

Causes of High Cost in Construction Site

Cost of Plant

In construction site, different techniques can be used by the contractor like.

- Labor intensive technique
- Equipment intensive technique
- Both

We need to prepare some short term work program that can be evaluated with the actual performance at the end of the period of work program and productivity of the techniques can also be calculated and reason can be find out for deficiencies to improve the same.

Causes of Construction Contractor Failures

Following are the major reason of contractor failures

- Growing too fast
- Increase in single job size
- Obtaining new types of work
- High Employee Turnover
- Inadequate Capitalization
- Poor Accounting System
- Poor Cash Flow

Calculation of Closing WIP

Opening WIP

+

Direct Exp. Incurred During the Year

+

Construction Overhead Incurred During the Year

-

Transfer to Cost of Sales

Practical Example of Calculating COC, COS & Profit for the Year

Sl. No	Particular	Amount (Rs.)
A	Total sale value	60,00,00,000
B	Area sold	4,50,000 sq. ft.
C (A/B)	Sale value/sq.ft.	60,00,00,000/4,50,000 =1333.33
D	Total saleable area	6,00,000 sq. ft.
E (D-B)	Unsold area	6,00,000-4,50,000 = 1,50,000 sq.ft
COC – Cost of Construction **COS – Cost of Sales**		

Practical Example of Calculating COC, COS & Profit for the Year

Sl. No	Particular	Amount (Rs.)
	Total cost incurred for the project	
F	Cost incurred during the F/Y 1	20,00,00,000
G	Cost incurred during the F/Y 2	15,00,00,000
H	Cost incurred during the F/Y 3	10,00,00,000
I	Cost incurred up to at the end of the F/Y 4	05,00,00,000
J (F+G+H+I)	**Total cost**	**50,00,00,000**

Practical Example of Calculating COC, COS & Profit for the Year

S.No	Particular	Amount (Rs.)
K	Total estimated cost	51,00,00,000
L (K/D)	Estimated cost/sq. ft.	850
M (J/K)	Percentage of completion	98.04%
N (A*M)	**Total sales recognized as per POC**	**58,82,40,000**
O	Sales booked for the F/Y 1	20,00,00,000
P	Sales booked for the F/Y 2	15,00,00,000
Q	Sales booked for the F/Y 3	05,00,00,000
R (N-O-P-Q)	Sales to be booked in F/Y 4	18,82,40,000

Practical Example of Calculating COC, COS & Profit for the Year

S.No	Particular	Amount (Rs.)
S (J/D*B)	**Total cost of sales**	**37,50,00,000**
T	Cost of sales booked in the F/Y 1	10,00,00,000
U	Cost of sales booked in the F/Y 2	12,00,00,000
V	Cost of sales booked in the F/Y 3	05,00,00,000
W (S-T-U-V)	Cost of sales to be booked in the F/Y 4	10,50,00,000
X (R-W)	**Profit for the F/Y 4 to be booked**	**08,32,40,000**

M/s. MM & Associates,
Where Client Satisfaction is Priority