

# **Estimating & Costing -1**

Slide Making By : **Nur Nahar Akter Santa**

Jr .Instructor

Civil Technology

Daffodil Institute of IT,Chittagong

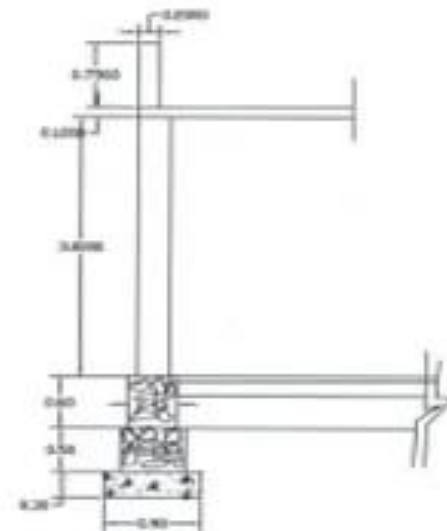
Chapter

4

## DETAIL & ABSTRACT ESTIMATES OF BUILDINGS

**Example 1:** From the given figure below calculate the detailed and abstract estimate for the single roomed building (Load bearing type structure) by

a) long wall & short wall method (b) Centre Line Method



CROSS SECTION AT 1-1

Note: All Dimensions are in 'M'

D=1X2.1M

W=1.5X1.2M

*Estimation and Costing*

**a) Long wall - Short Method**

S.No.	Particulars of Items	No.	L	B	H	Q	Explanation
1.	<b>Earth Work excavation</b> for foundation						
	a) Long walls	2	6.2	0.9	1.4	15.264	$L=5.3+.45+.45=6.2$ $D=0.3+0.5+0.6=1.4$
	b) Short walls	2	3.4	0.9	1.4	8.568	$L=4.3-0.45-0.45=3.4$
					<b>Total</b>	<b>24.192</b>	<b>m<sup>3</sup></b>
2.	<b>C.C.(1:4:8) bed for</b> foundation						
	a) Long walls	2	6.2	0.9	0.3	3.348	
	b) Short walls	2	3.4	0.9	0.3	1.836	
					<b>Total</b>	<b>5.184</b>	<b>m<sup>3</sup></b>
3.	<b>R.R.Masonry in CM</b> <b>(1:6) for</b>						
	a) Footings						
	i) Long walls	2	5.9	0.6	0.5	3.54	$L=5.3+0.3+0.3=5.9$
	ii) Short walls	2	3.7	0.6	0.5	2.22	$L=4.3-0.3-0.3=3.7$
					<b>Total</b>	<b>5.76</b>	<b>m<sup>3</sup></b>
	b) Basement						
	i) Long walls	2	5.75	0.45	0.6	3.105	$L=5.3+0.225+0.225=5.75$
	ii) Short walls	2	3.85	0.45	0.6	2.079	$L=4.3-0.225-0.225=3.85$
					<b>Total</b>	<b>5.184</b>	<b>m<sup>3</sup></b>
	<b>Total R.R. Masonry for footings and Basement</b>						
							$= 5.76+5.184 = 10.94 \text{ m}^3$

**Detail & Abstract Estimates of Buildings**


S.No.	Particulars of Items	No.	L	B	H	Q	Explanation
	Deductions for openings						
	a) Doors	1	1.0	0.3	2.1	0.63	
	b) Windows	3	1.5	0.3	1.2	1.62	
					<b>Total</b>	<b>(-)2.25</b>	<b>m<sup>3</sup></b>
	<b>Net Brick Masonry</b>		<b>= 20.28</b>			<b>- 2.25 =</b>	<b>18.03m<sup>3</sup></b>
5.	<b>R.C.C. (1:2:4) for</b>						
	a) Roof slab	1	5.6	4.6	0.12	3.090	
	b) Lintels over						
	i) Doors	1	1.2	0.3	0.15	0.054	
	ii) Windows	3	1.5	0.3	0.15	0.202	
	c) Beams						
	i) Long beams	2	5.6	0.3	0.3	1.008	
	ii) short beams	2	4.0	0.3	0.3	0.720	
					<b>Total</b>	<b>5.074</b>	<b>m<sup>3</sup></b>
6.	<b>Sandfilling for basement</b>	1	4.85	3.85	0.48	8.96	L=5.0-0.075-0.075=4.85
7.	<b>C.C.(1:4:8) for flooring</b>	1	4.85	3.85	0.1	1.86	B=4.0-0.075-0.075=3.85
8.	<b>Flooring with Mosaic tiles</b>	1	5.0	4.0	--	20.0	<b>m<sup>2</sup></b>
9.	<b>Plastering with CM (1:6) for super structure Inside</b>						
	For walls	1	18.0	--	3.0	54.0	L=2(5.0+4.0)=18.0

*Estimation and Costing*

S.No.	Particulars of Items	No.	L	B	H	Q	Explanation
10	Plastering for Ceiling with CM(1:5)	1	5.0	4.0	--	20.0	m <sup>2</sup>
11	White Washing with two coats with Janatha cement						
	Same as quantity of plastering for walls and ceiling					151.18	(=131.18+20=151.18)
12.	Colour washing with two coats						
	Same as quantity of plastering for walls and ceiling					151.18	(=131.18+20)151.18)
13	Supply & Fixing of best country wood for a) Doors b) Windows	1 3				1 No. 3No.	
14	Painting with ready mixed synthetic enamel paints with two coats over primary coat for new wood for						

*Detail & Abstract Estimates of Buildings*

**b) Centre Line Method**

S.No.	Particulars of Items	No.	L	B	H	Q	Explanation
1.	<b>Earth Work exevation</b> for foundation 5.3  4.3	1	19.2	0.9	1.4	24.192	$m^3$ $L=2(5.3+4.3)=19.2$
2.	<b>C.C.(1:4:8) bed for foundation</b>	1	19.2	0.9	0.3	5.184	$m^3$
3.	<b>R.R.Masonry in CM (1:6) for</b>						
	a) Footings	1	19.2	0.6	0.5	5.76	
	b) Basement	1	19.2	0.45	0.6	5.184	
					Total	<b>10.944</b>	
4.	<b>Brick masonry with CM (1:6) for super structure</b>	1	19.2	0.3	3.0	17.28	$m^3$
	For parapet wall	1	20.0	0.2	0.75	3.00	
	Deductions for openings						
	a) Doors	1	1.0	0.3	2.1	0.63	
	b) Windows	3	1.5	0.3	1.2	1.62	
					Total	<b>(-)2.25</b>	$m^3$
	<b>Net Brick Masonry =</b>		<b>17.28</b>	<b>+3.0</b>	<b>-2.25 =</b>	<b>18.03</b>	$m^3$
5.	<b>R.C.C. (1:2:4) for</b>						

*Estimation and Costing*

8.	flooring with Mosaic tiles	1	5.0	4.0	--	20.0	
9	Plastering with CM (1:6)for super structure						
	<u>Inside</u>						
	Forwalls	1	18.0	--	3.0	54.0	
	<u>Out side</u>						
	Forwalls	1	20.4	--	3.87	61.2	
	Basement outside	1	21.6	--	0.6	12.96	
	Parapet wall						
	a) Inside	1	18.8	--	0.75	14.1	
	b)top	1	19.6	0.2	---	3.92	
	<b>Deductions for opeinings</b>				Total	<b>146.18</b>	<b>m<sup>2</sup></b>
	Doors	1x2	1.0	--	2.1	4.2	L=5.0-0.075-0.075=4.85
	Windows	3x2	1.5	--	1.2	10.8	B=4.0-0.075-0.075=3.85
	<b>Net Plastering =</b>		<b>146.18-15</b>	<b>=</b>		<b>131.18</b>	<b>m<sup>2</sup></b>
10	Plastering for Ceiling with CM(1:5)	1	5.0	4.0	--	20.0	<b>m<sup>2</sup></b>
11	White Washing with two coats with Janatha cement						
	Same as quantity of plastering for walls and ceiling					151.18	<b>m<sup>2</sup></b> (131.18+20=151.18)

*Detail & Abstract Estimates of Buildings*

S.No.	Particulars of Items	No.	L	B	H	Q	Explanation
14	Painting with ready mixed synthetic enamel paints with two coats over primary coat for new wood for a) Doors b) Windows	2½x1 2½x3	1.0 1.5	--- ---	2.1 1.2	4.725 12.15	m <sup>2</sup>
					Total	<b>16.875</b>	
15	Petty supervision and contingencies at 4% and rounding off.						