

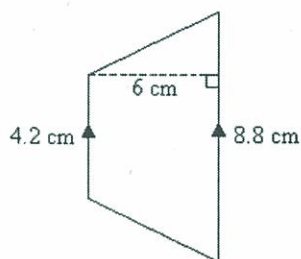
$$a = 20 \text{ cm}, b = 14 \text{ cm}, h = 12 \text{ cm}$$

$$\begin{aligned} A &= \frac{1}{2}(a+b)h \\ &= \frac{1}{2}(20+14) \times 12 \\ &= \frac{1}{2} \times 34 \times 12 \\ &= 204 \end{aligned}$$

So, the area of the trapezium is 204 m².

Example 5

Find the area of the following trapezium.



Solution:

$$a = 8.8 \text{ cm}, b = 4.2 \text{ cm}, h = 6 \text{ cm}$$

$$\begin{aligned} A &= \frac{1}{2}(a+b)h \\ &= \frac{1}{2}(8.8+4.2) \times 6 \\ &= \frac{1}{2} \times 13 \times 6 \\ &= 39 \end{aligned}$$

So, the area of the trapezium is 39 cm².

Remember:

- A trapezium is a quadrilateral that has only one pair of parallel sides.
- The area of the trapezium is given by the following formula where a and b are the lengths of the parallel sides and h is the perpendicular distance between the parallel sides.

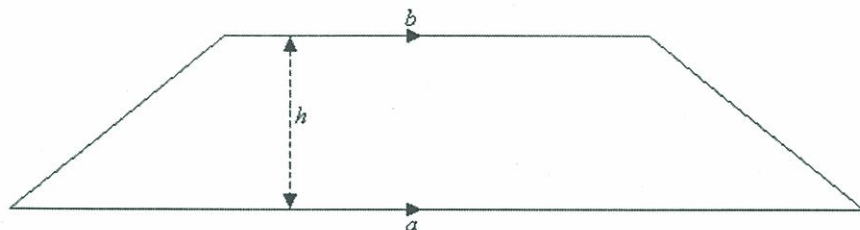
$$A = \frac{1}{2}(a+b)h$$

6

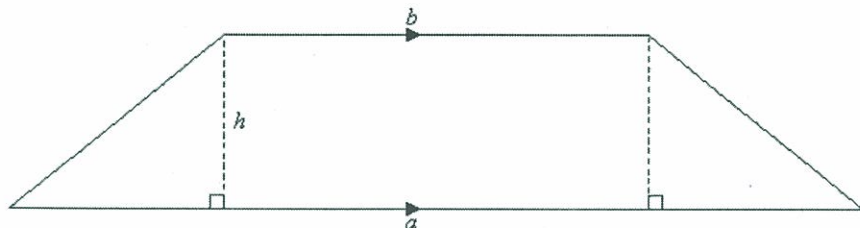
Area of a Trapezium

A trapezium is a quadrilateral that has only one pair of parallel sides.

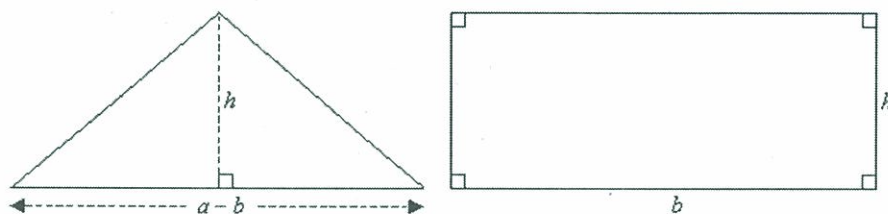
Consider the area of the following trapezium.



To calculate the area of a trapezium, divide it into a rectangle and two triangles as shown below.



Now, piece together the triangular ends so that the trapezium is divided into a triangle and rectangle. The base of the triangle is the difference between the lengths of two parallel sides. That is, $a - b$.

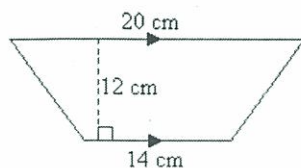


\therefore Area of the trapezium = Area of the rectangle + Area of the triangle

$$\begin{aligned}
 &= bh + \frac{1}{2}(a-b)h \\
 &= h \left[b + \frac{1}{2}(a-b) \right] \\
 &= h \left[\frac{2b}{2} + \frac{a-b}{2} \right] \\
 &= h \left[\frac{2b+a-b}{2} \right] \\
 &= h \left(\frac{a+b}{2} \right) \\
 &= \left(\text{Half the sum of} \right) \times \left(\text{Perpendicular distance} \right) \\
 &\quad \left(\text{parallel sides} \right) \quad \left(\text{between the parallel sides} \right)
 \end{aligned}$$

Example 4

Find the area of the following trapezium.



Solution:

2

9. Green room (min)

s.no	description	no	l	b	h	area	Remarks
			in metre	in metre			
	Step brick work c.m.1:5						
1	Providing make up mirror	15	1	1	1	15.00	Nos
2	providing make up cubicals	15	1	1	1	15.00	
3	Provinding make up storage	5	1	1	1	5.00	
4	Add sundries / other arrangement	5	1	1	1	5.00	
	All above are provisional						

8. koothamabalam plinth area

s.no	description	no	l	b	h	area	Remarks
			in metre	in metre			
1	koothambalam outside - steps area	1	4.5	2.4	1	10.80	
2	Front porch area	1	5.1	5	1	22.95	
3	Next to porch area	1	5.3	5.2	1	27.56	
4	Koothamabalam inside well area - centre area	1	34	13.3	1	452.20	
5	koothambalam inside well area towards entry side	1	23.65	10.4	1	245.96	
6	Koothambalam inside well area towards stage side	1	26.3	10.4	1	273.52	
7	Koothamabalam stage area	1	10.75	18.6	1	199.95	
8	Koothambalam green room area	0.5	3.1415	9.3	9.3	135.85	
9	basement projection alround	2	73	0.6	1	87.60	
10	add step side entrance / artist entrance	4	3	4	1	48.00	
	Total in sq m.					1504.39	
	Actual co off	1	1504.39	1.75	1	2632.69	

7. Red oxide flooring

s.no	description	no	l in metre	b in metre	h	area
1	koothambalam inside - octagonal area	8	96.074	1	1	768.59
2	Area raiser area	8	96.074	10%	1	76.86
3	front entrance area	1	4.5	5.1	1	22.95
4	sill ①	1	1.8	0.4	1	0.72
5	front entrance area 2	1	4.5	4.35	1	19.58
6	sill ②	1	4	0.4	1	1.60
7	sill ③	1	3.45	0.45	1	1.55
8	Stage area	1	12.4	18	1	223.20
9	deduction stage ^{wooden} area	-1	11.8	9	1	-106.20
10	Door sill	2	2	0.5	1	2.00
11	Green area -side portion ^{wood}	1	3.1	3.7	1	11.47
12	green room area	1	1.57	81	1	127.17
13	mezzaine floor seating area ①	1	80	1	1	80.00
14	mezzaine floor seating area ②	1	7.83	4.3	1	33.67
15	mezzaine floor seating area ③	1	10.5	3.7	1	38.85
16	Add sundries	1	27.99	1	1	27.99
	Total in sq m.					1330.00

4

6. wooden stage flooring

s.no	description	no	l	b	h	area	Remarks
			in metre	in metre			
	stage area						
1	deep stage	1	11.6	9	1	104.40	
2	Procenium	1	17.6	2.84	1	49.98	
7	Add diagonal area/sundries	1	10.62	1	1	10.62	
	Total in sq m.					165.00	

6

5. basement wooden roofing

s.no	description	no	l	b	h	area	Remarks
			in metre	in metre			
	Basement roofing						
1	green room wooden flooring	1	11.05	3.05	1	33.70	
2	Add diagonal area/sundries	1	1.3	1	1	1.30	
	Total in sq m.					35.00	

10 Green Room (min)
Chinwa - ?
11)

4 Wooden joineries - Teak- 1st class wood for Door

5

s.no	description	no	l	b	h	area	Remarks
			in metre	in metre			As per drg
	koothambalam - from east side entrance to North side (front side)						
1	East / west side public main entrance door	2	2	2.2	1	8.80	D12/D11
2	East / west side Artist main entrance door	2	2.1	2.65	1	11.13	D1/D2
3	Green room area - north door entry	2	0.9	2.6	1	4.68	D5/D8
4	From stage to Green room entry door - either side	2	0.95	2.65	1	5.04	D3/D4
5	From stage to Green room entry door - either side	2	1.2	2.65	1	6.36	D9/D10
6	Green room out - south side	2	0.9	2.6	1	4.68	D6/D7
7	Inside main entry door	1	4	2.75	1	11.00	D13
8	Entry porch opening	2	0.9	0.9	1	1.62	D15
9	Main entry door	1	1.8	2.4	1	4.32	D14
10	Add sundries	1	2.37	1	1	2.37	
11	Total in sq m.					60.00	

8

43

Wooden joineries - Teak- 1st class wood

DOOR - Pomby

s.no	description	no	l	b	h	co.ef	area	Remarks
			in metre					As per drg
	entrance to North side (front side)							
1	East / west side public main entrance door	2	2	2.2	1	2.5	22.00	D12/D11
2	East / west side Artist main entrance door	2	2.1	2.65	1	2.5	27.83	D1/D2
3	Green room area - north door entry	2	0.9	2.6	1	2.5	11.70	D5/D8
4	From stage to Green room entry door - either side	2	0.95	2.65	1	2.5	12.59	D3/D4
5	From stage to Green room entry door - either side	2	1.2	2.65	1	2.5	15.90	D9/D10
6	Green room out - south side	2	0.9	2.6	1	2.5	11.70	D6/D7
7	Inside main entry door	1	4	2.75	1	2.5	27.50	D13
8	Entry porch opening	2	0.9	0.9	1	2.5	4.05	D15
9	Main entry door	1	1.8	2.4	1	2.5	10.80	D14
10	wooden louvers at 1st roof lvl	8	12.7	1.2	1	2.5	304.80	
11	wooden louvers at mezzaine floor lvl	1	41.05	0.6	1	2.5	61.58	
12	ground level wooden louvers	2	29.4	0.6	1	2.5	88.20	
13	Basement wooden flooring	1	35	1	1	2	70.00	
15	Add handrails	1	31.36	1	1	2.5	31.36	
16	Total in sq m.						700.00	

9

3. Applying enamel painting for steel work

s.no	description	no	l	b	h	area	Remarks
			in metre	in metre	co.eff		
1	Steel catwalk for service - staircase	1	9.5	1	2.2	20.90	
2	landing platform	1	2	2.0	2.5	10.00	
3	flight 1	2	2.5	1	2.5	12.50	
4	sl.1,2 &3 railing	1	14	1	1.5	21.00	
5	last landing	2	11.5	1	2.5	57.50	
6	last railing	1	7	1	1.5	10.50	
7	ladder	1	3.2	0.7	1.5	3.36	
8	to basement staircase landing	1	3.1	1.1	2.5	8.53	
9	flight 1	1	4	0.8	2.5	8.00	
10	landing 2, 3	1	3	0.8	2.5	6.00	
11	railing	1	6.5	1	1.5	9.75	
12	step to 1st floor flight greenroom	1	3.3	0.95	2.5	7.84	
13	Green room flight 2	1	3.3	0.95	2.5	7.84	
14	landing	1	1	1.5	2.5	3.75	
15	Inside steel staircaseflight1	2	3.3	0.85	2.5	14.03	
14	lastflight 2	2	4	0.85	2.5	17.00	
15	middle flight	2	2	0.85	2.5	8.50	
16	landing	2	1.5	1	2.5	7.50	
17	railing	1	9.6	1	1.5	14.40	
18	railing	1	12.75	1	1.5	19.13	
19	corbel area -weldmesh	1	74	4	1	296.00	
20	front entrance structural steel	1	5.1	4.5	2	45.90	
21	front porch structural steel	1	4.35	4.5	2	39.15	
22	front box section vertical mem	2	4	0.5	1.5	6.00	
25	add sundries	1	44.94	1	1	44.94	
	Total					700.00	

s.no	description	no	l	b	h	area	Remarks
inside area							
1	koothambalam well / seating area	6	12.7	1	2	152.40	
2	seating area	6	9.7	1	1	58.20	
3	Stage facing wall	2	18.6	10	1	372.00	
4	deduct stage opening	-2	11.8	4.5	2	-212.40	
5	stage side walls /passage	2	12.1	10.69	1	258.70	
6	Stage back drop wall	2	18.6	7.5	1	279.00	
7	stage side passage beamsides	2	11.8	1.8	1	42.48	
8	stage circular column	4	1.57	7.5	1	47.10	
9	green entry lobby area alround	2	14	2.6	1	72.80	
10	green g/f wall alround	2	18.6	3	1	111.60	
11	deduct opening	-2	11.8	2	1	-47.20	
12	green room i/f floor dwarf wall	1	18	2.2	1	39.60	
13	green room inside wall	1	9	3.6	1	32.40	
14	basement walls alround	2	42.2	2.6	1	219.44	
15	basement two rooms ceiling	2	4.05	2.9	1	23.49	
16	basement inside wall sides	6	3.5	2.6	1	54.60	
17	Mezzanine floor dwarf walls	5	12.7	3.65	1	231.78	
18	Mezzanine floor dwarf walls	5	7.3	2	1	73.00	
19	Front porch alround	2	9	4.5	1	81.00	
20	Entrance facing /cable wall	1	5.1	4.5	1	22.95	
21	Add steps	5	10	1	1	50.00	
22	Add sundries	1	37.07	1	1	37.07	
	Total					2000.00	

3. Applying Emulsion / weather coat for external walls / internal walls

s.no	description	no	l	b	h	area	Remarks
			in metre	in metre			
	length of corbel area - 7m details of measurements to be painted						
1	Vertical precast member - bow shape	6	4	0.7	1	16.80	
2	Horizontal precast slab	50	1.4	0.4	1	28.00	
3	Top slab coverage	1	7	4.2	1	29.40	
4	Add sundries	1	0.6	1	1	0.60	
5	Total in sq m. per 7 running m					74.80	
	Total sqm in 1 running metre	7				10.69	

s.no	description	no	l	b	h	area	Remarks
	Outside area						
1	length of corbel area - around - 1st level	2	40	10.69	1	855.20	
2	basement pillasters around	2	73	1	2.8	408.80	
3	Front porch wall outside	2	5.8	6	1	69.60	
4	Front entrance wall upto base	2	5.1	1	2	20.40	
5	length of corbel area - around - 2nd level	2	25	10.69	1	534.50	
6	add sundries	1	11.5	1	1	11.50	
	Total					1900.00	

2. Weld mesh fixing work

C/M/Work

s.no	description	no	l	b	h	area	Remarks
			in metre	in metre			
	koothambalam out side -Corbel area coverage with weld mesh with MS flat frame						
1	Front area	2	4.4	4	1	35.20	average
2	East side near stair case	1	1.8	4	1	7.20	
3	East side near stair case	1	1.85	4	1	7.40	
4	Near stage area	1	1.5	4	1	6.00	
5	Near stage/ chequered plate	1	1.1	4	1	4.40	
6	Near side entrance	1	3.75	1.1	1	4.13	
7	Add diagonal area/sundries	1	10.67	1	1	10.67	
	Total in sq m.					75.00	

1. Mangalore tile fixing work

s.no	description	no	l	b	h	area	Remarks
			in metre	in metre			average
1	koothambalam outside - front facade - Main roof splay	1	12.1	8	1	96.80	$14+10.2/2$
2	Front façade - 2nd level roof area	2	4.3	6	1	51.60	
3	2nd level roof hip and valley to m/s <i>lope</i>	2	6	6	1	72.00	triangle
4	2nd level roof projection	1	6	2.1	1	12.60	
5	Front façade - entry level roof	1	2	6.6	10	132.00	
6	Add sundries	1	35	1	1	35.00	
	Total in sq m.					400.00	

2. Steps work around the koothambalam

Cm/Note

s.no	description	no	l	b	h	area	Remarks
			in metre	in metre			
	Step brick work c.m.1:5						
1	Front area	1	4.7	2	0.5	5.41	average
2	Side entrance east / west	2	4	2	0.33	5.28	
3	Artist entrance east / west	2	4	2	0.33	5.28	
4	Add sundries	1	1.03	1	1	1.03	
	total cum					17.00	
s.no	description	no	l	b	h	area	Remarks
			in metre	in metre			
	Plastering in cm1:5						
1	Front steps side	2	2	2	1.5	9.00	
2	Front porch side	2	5.1	2.5	1	25.50	
3	side entrance east / west	1	3	4	1.5	18.00	
4	Artist entrance east / west	1	4	2.65	1	10.60	
5	Front steps top	1	4.7	2	1	10.81	
6	Front porch side	1	5.1	2.5	1	12.75	
7	side entrance east / west	2	3	1.5	0.5	4.50	
8	Artist entrance east / west	2	3	1.5	0.5	4.50	
9	Add sundries	1	4.34	1	1	4.34	
	Total in sq m.					100.00	

(15)

EMERGENCY /MINIMUM WORKS FOR PROTECTION FOR KOOTHAMBALAM STRUCTURE & FUNTIONALISINGWORK				
Sl.No	Area	Description of works	Estimate value in lakh	Remarks
i	in sq.m	Civil works		
	400.00	1.Front side roofing	5	Partly open to sky
	LS	2.Access for all sides & such masonry works	5	
	5400.00	3. Basic wood protection etc /painting	15	
	60.00	4. Providing Door for all entries	5	Presently these are no doors to close the building
	35.00	5. Basement works	3	Presently open
	165.00	6.Stage wooden flooring	13	
	1330.00	7.Red oxide flooring	10	Presently there are concrete sufrace needs to be finished
	2632.69	8. (Reworking) Refixing roof tiles which are loose	10	that has become loose causing leakage at any points
	LS	9.Green room (min) civil work	5	
		Sub total	71	
ii		Electrical installation (Balance work)	30	40% of the work done already
iii		HVAC work (completing balance of works)	48	expensive equipemnts are laying on site which will get damaged it .
iv		Sound Equipment	10	available withus (Equipments etc.,)
v		Stage lighting (commissioning only)	10	..do..
vi		Sculpture installation	10	stone sculpture are ready for fixing on a apprioate place
		Grand total	179	

NAME OF WORK.....

ABSTRACT

S. No.	Quantity	Description of work	Rate	Per	Amount	Total
10)		Supply of	

17

Appx
 - tile ramp & supports
 clamping
 56
 24
 80
 Civil work - walling
 red cement front Brk } 4.00
 1.00
 5.00
 48
 - Cure

1) Towards end - Painting
 (Wood - Joins) = 5.00
 Retortide floor = 10.00
 Brge wood floor = 13.00
 Barre floor = 3.00
 poling steel + painting
 front work = 15.00
 Electrical 0.5 - 0.20 = 0.30 ✓
 Inching

2) General lighting - general = 0.10 ✓

3) HVAC = 0 ✓

4) Slab casting work = 0 ✓

5) Scaffolding / shoring
 in side / outside (5+5) = 0.10 ✓

6) Scaffolding (Common) = 0.10 ✓

7) Shyde lighting (0.6) (Common) = 0.15 ✓

+ 8) painting works + Consultant charge
 1.500
 0.25
 1.75

in the unit

Description

(2)

No.

(3)

MEASUREMENT

L
(4)

U
(5)

D
(6)

Quantity

(7)

1) Measured sealing =

2) Green room = arrangements

~~3)~~

19

Reference / Corral area

Description
(2)

No.
(1)

MEASUREMENT

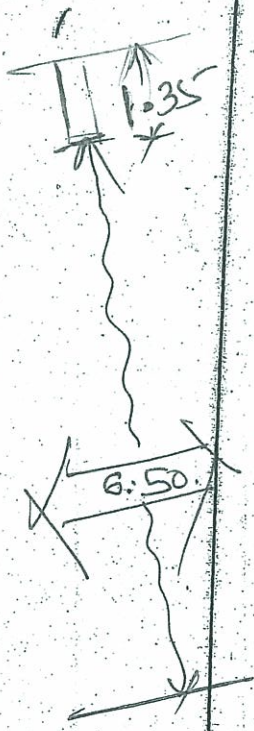
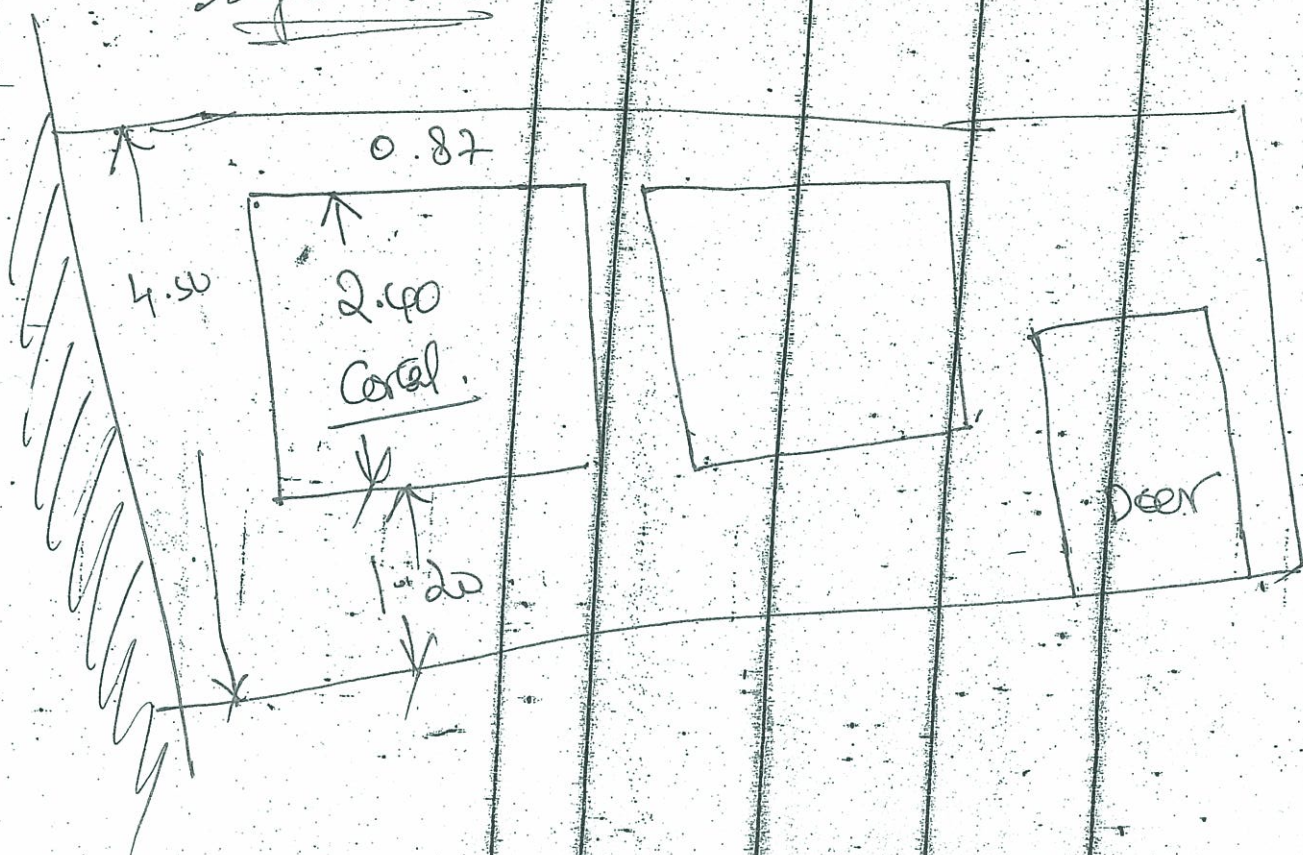
L
(4)

U
(5)

D
(6)

Quantity

Single Side



Description

(2)

No.

(3)

MEASUREMENT

L

(4)

U

(5)

O

(6)

Quantity

(7)

Superford

2.40

1.30

1.08
wooden rails

TSD

single back dig

average

Green Iron

2.60

7.30

3.05

8.00

(A)

C. Section

2.20
.70
3.90
4.20
7.30

(4.50)

(A)

0.90
1.6
1.2

(21)

pauly - front side

Description

(2)

pauly - front side

No.

(1)

MEASUREMENT

L

(1)

U

(2)

D

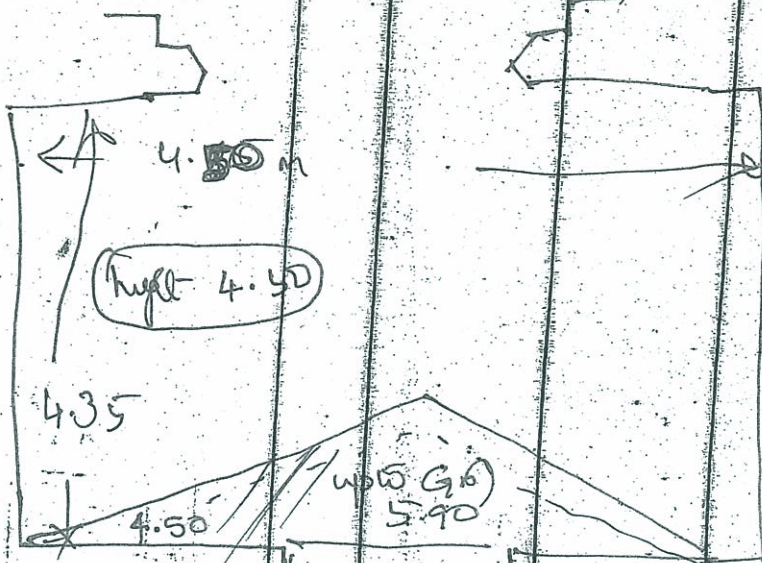
(6)

Quantity

(7)

(E)

(W)



open area

Channel
15 x 7.5 cm

22

Description

No.

MEASUREMENT

Quantity

(2)

(1)

L
(4)

U
(5)

O
(6)

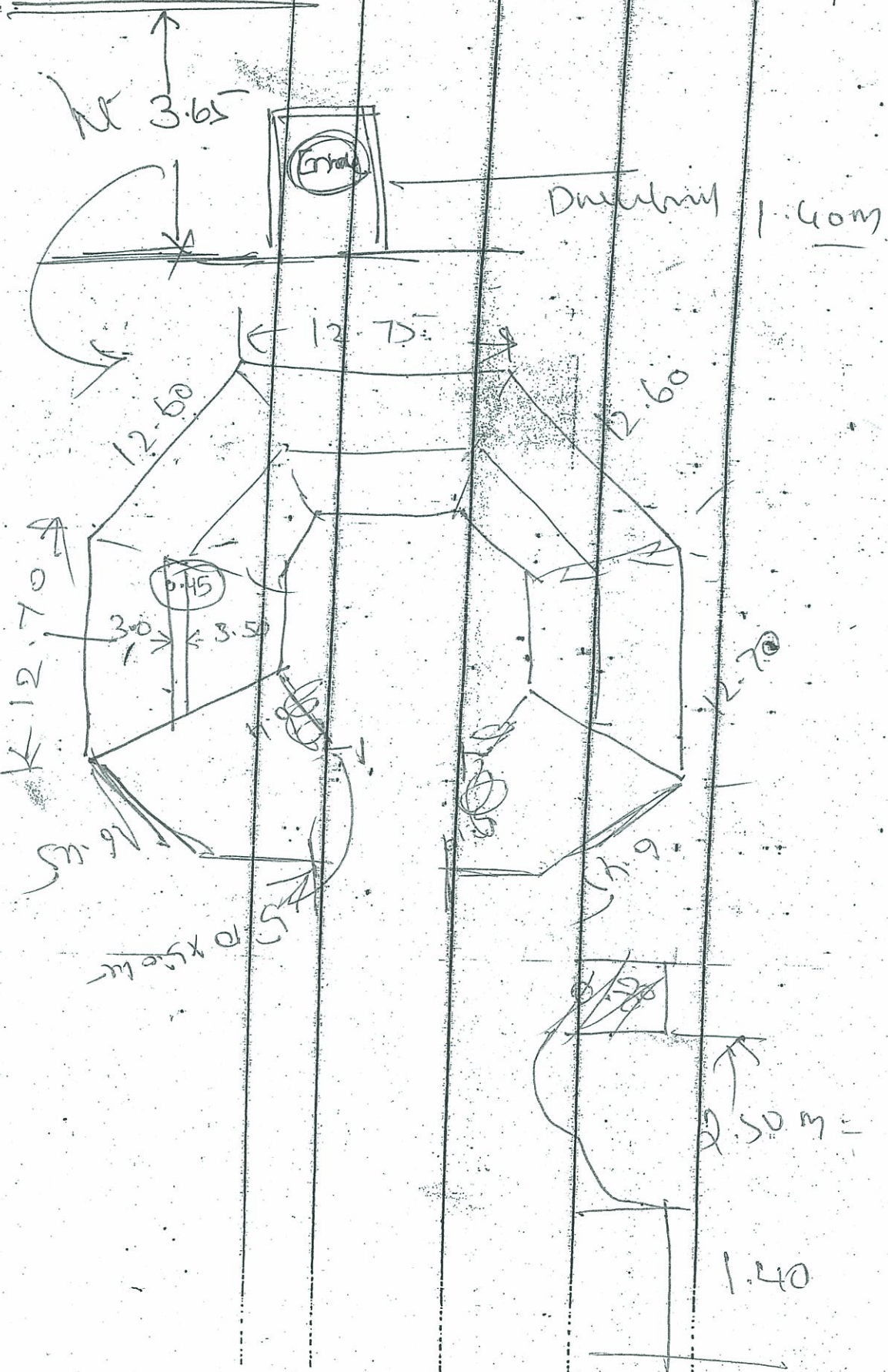
(7)

Imbe / megeu

Tom

Floor to

mezzanine floor



23

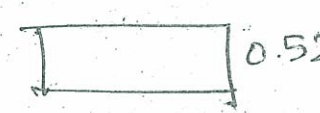
Description (2)	No. (3)	MEASUREMENT			Quantity
		L (4)	U (5)	D (6)	



Wooden Ramp

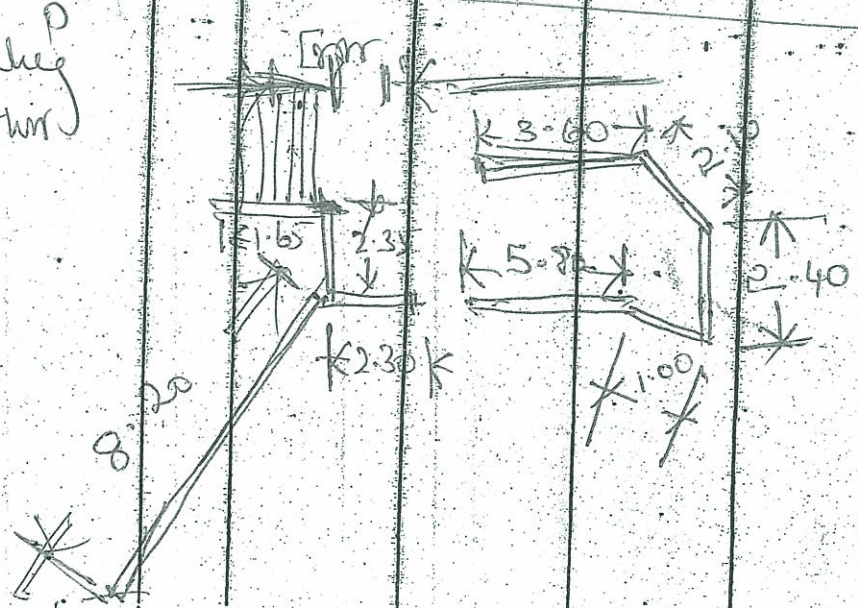
Scam

wooden
Length
3.15m



Wooden railing
at Grauffur

X 2 Nos



Same -

Inverte - Steel Structure

No.	MEASUREMENT			
	L (ft)	U (ft)	D (ft)	
Flight ①	2x 1x1	3.30	0.85	2.50
East ②	2x 1x1	4.00	0.85	2.50
Minelle Part	2x 1x1	2.00	0.85	2.50
Landj	2x 1x1	1.50	1.00	2.00
Handrail	1x1	9.60	1.00	1.00
	1x1	12.75	1.00	1.00

Quantity

Staircase Finishing - 0.50 per sq ft
 at High level - 15 nos -
 - do - - 26 nos -

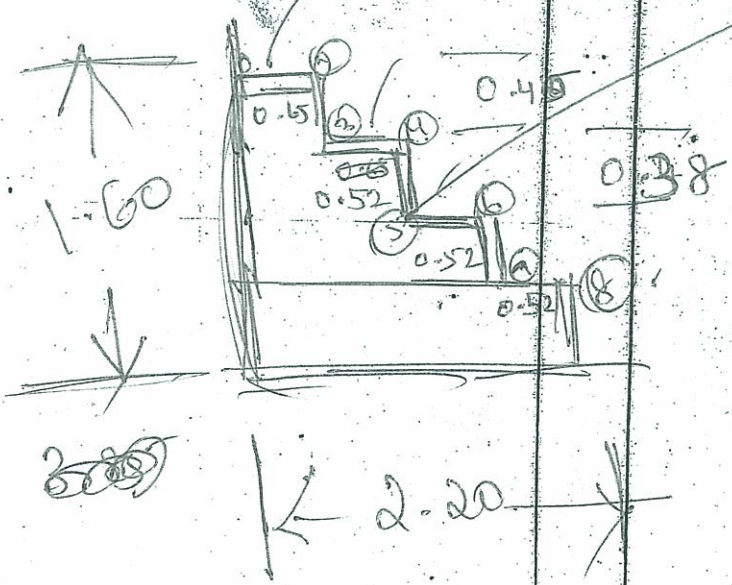
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Ⓑ

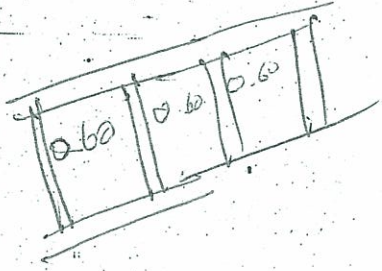
Mezzanine Part

5.10
 8.70

2 nos



True



25

Description

Trade

No.

MEASUREMENT

Quantity

(1)

(1)

L

U

D

Plumbing

(A) Steel cabinet
sone

9.50 x 1.00

6.00

2.50

(B) Lamp

1 x 2.00 x 2.00

2.50

(C) Flyer

2 x 2.50 x 1.00

2.50

(D) H&L ramp

(9.5 + 2 + 5) x 1.00

1.50

(E) Lark Lady

2 x 1.50 x 1.00

2.50

(F) ramp

(4 + 3) x 1.00

1.50

(G) ladder



1 x 3.90 x 0.70 x 1.00

(H) Tabernacle

1 x 3.10 x 1.10 x 2.50

flyer (D) 1.00 +
1.60 +
1.30

3.90

1 x 3.90 x 0.80 x 2.50

Lark B
C

1 x 2.00 x 0.80 x 2.50

Ramp

1 x 6.50 x 1.00 x 1.50

step to 1st floor

Green run

1 x 3.30 x 0.95 x 2.50

flyer

1 x 3.30 x 0.95 x 2.50

Lark

1 x 1.50 x 1.00 x 2.00

main area detail

Description

(2)

No.

(1)

MEASUREMENT

L

(4)

U

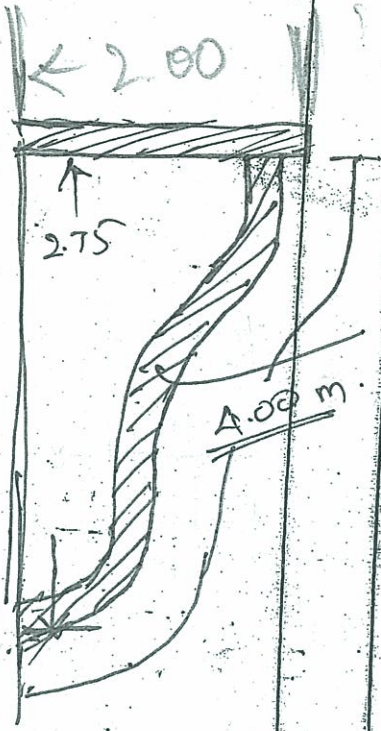
(5)

D

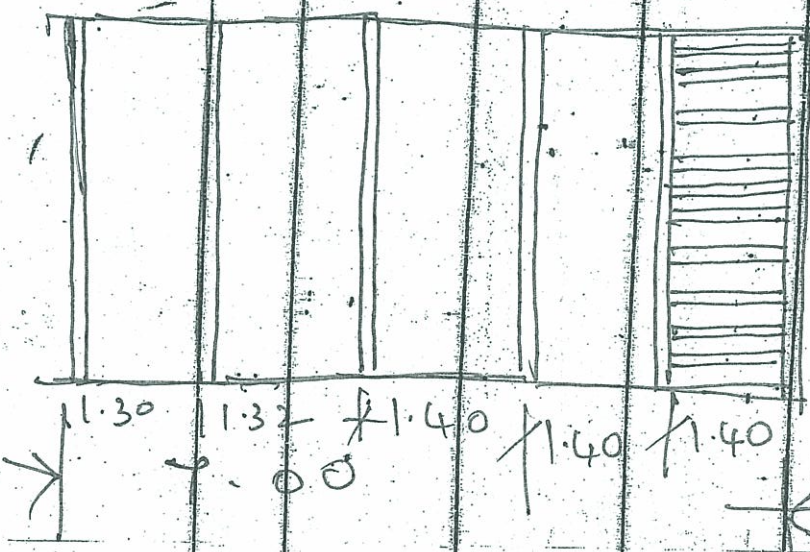
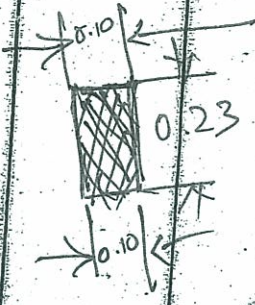
(6)

Quantity

(7)



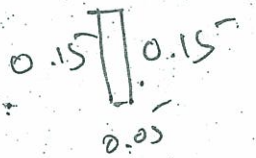
0.23



10.109

panel

0.40



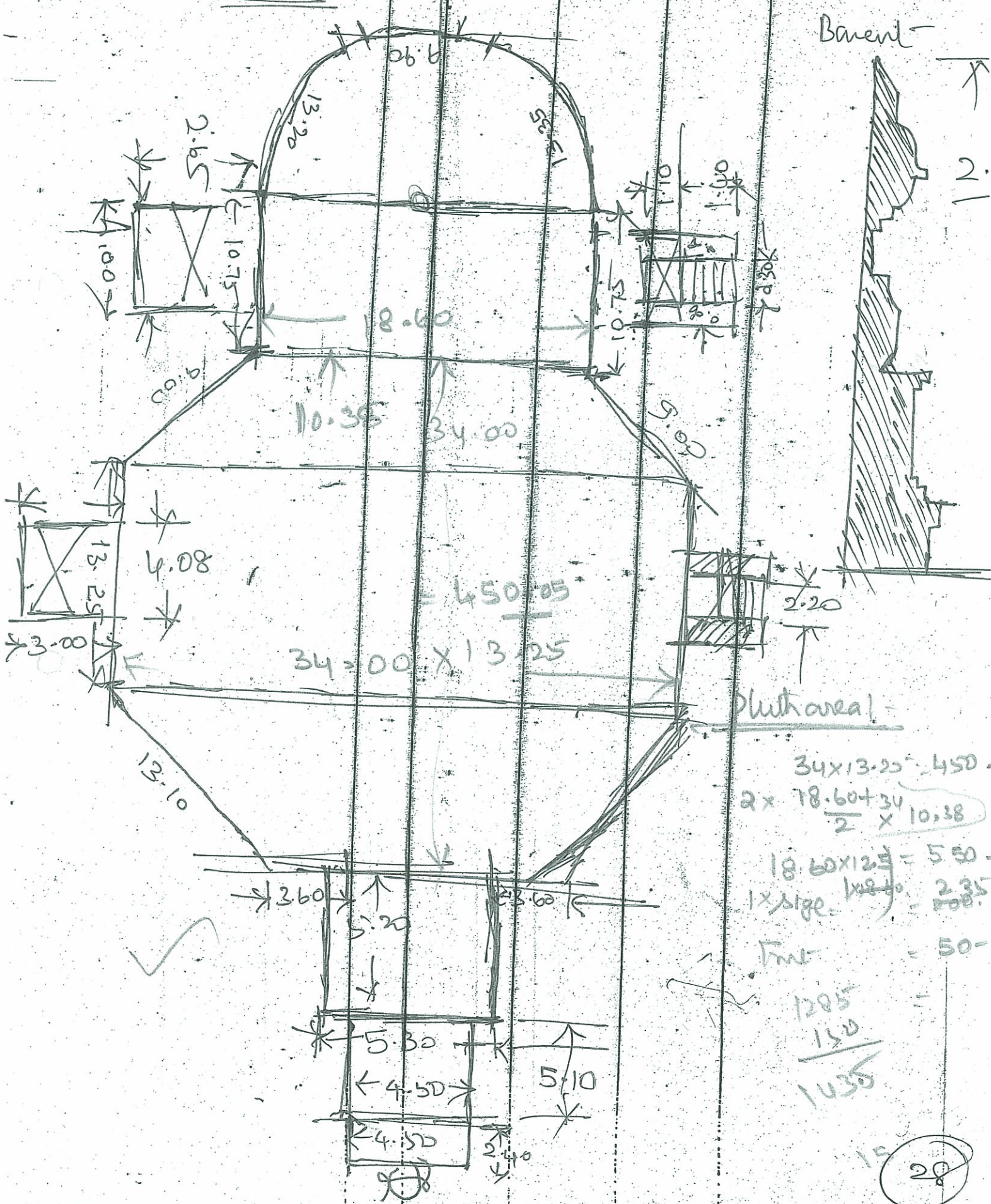
27

Kerahan balok Ontey debilo

Description (12)	No. (13)	MEASUREMENT			Quantity
		L (14)	U (15)	D (16)	

Ontey

Barent



pluth area!

$34 \times 13.25 = 450$
 $2 \times \frac{18.60 + 34}{2} \times 10.38$
 $18.60 \times 12.9 = 550$
 $1 \times \text{size} \times 12.9 = 235$
 $\text{Total} = 50$
 $\frac{1285}{150}$
 1435

Description

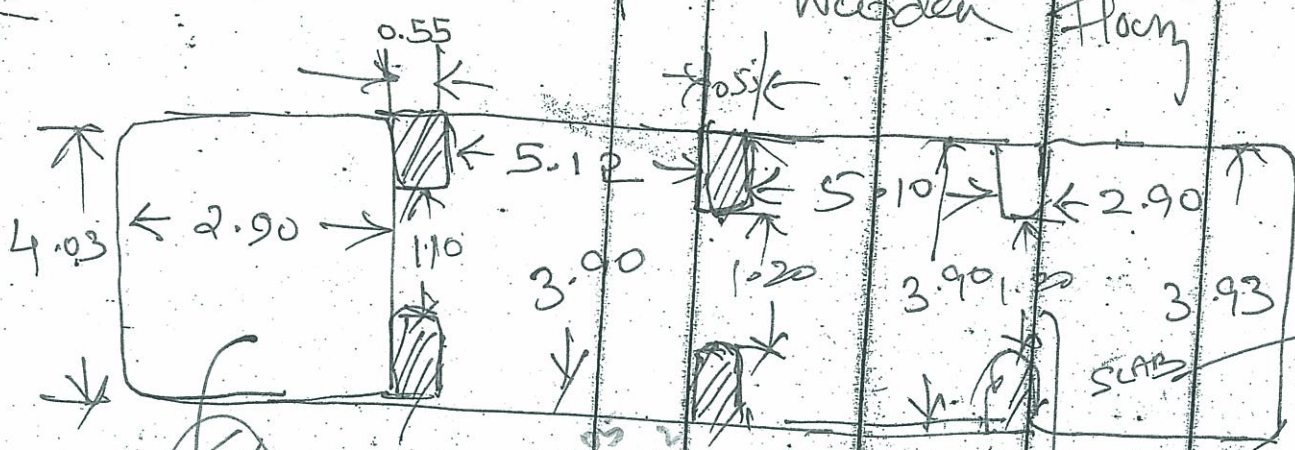
No.

MEASUREMENT

Quantity

Boreput - Form plank

wooden flooring



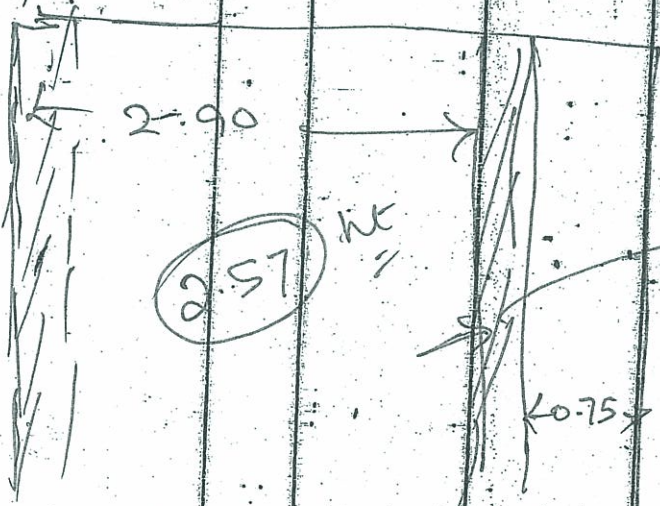
2.33

2.60 m

12x4.55
48.60

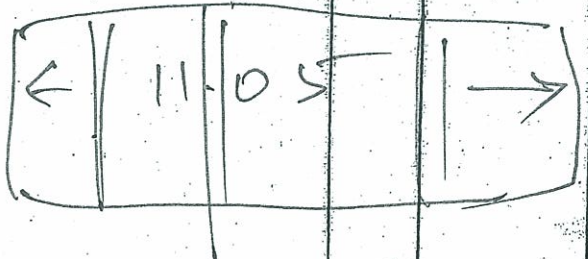
49.00

Vopening m/w 1.95



2.57

wooden flooring



3.03

3.03 x 11.05

h/w 2.80 m

h/w g. Revu

For wooden plank
w/ curv 2.90 m

2.90 m

For BNL floor w
wooden h/w

29

Other work details

Description (2)	No. (3)	MEASUREMENT			Quantity (7)
		L (4)	U (5)	D (6)	
Mezance floor - below					
① — Apartments band fixing up					
② — Sealup area plates —					
③ Painting - water based - Balconies mezance					
④ Painting brick Chandel — (Grp)					Steel mt
⑤ Lured off for wooden Surbar —					
⑥ Over/Incy painting wall					

Description

(2)

No.

(1)

MEASUREMENT

L
(1)

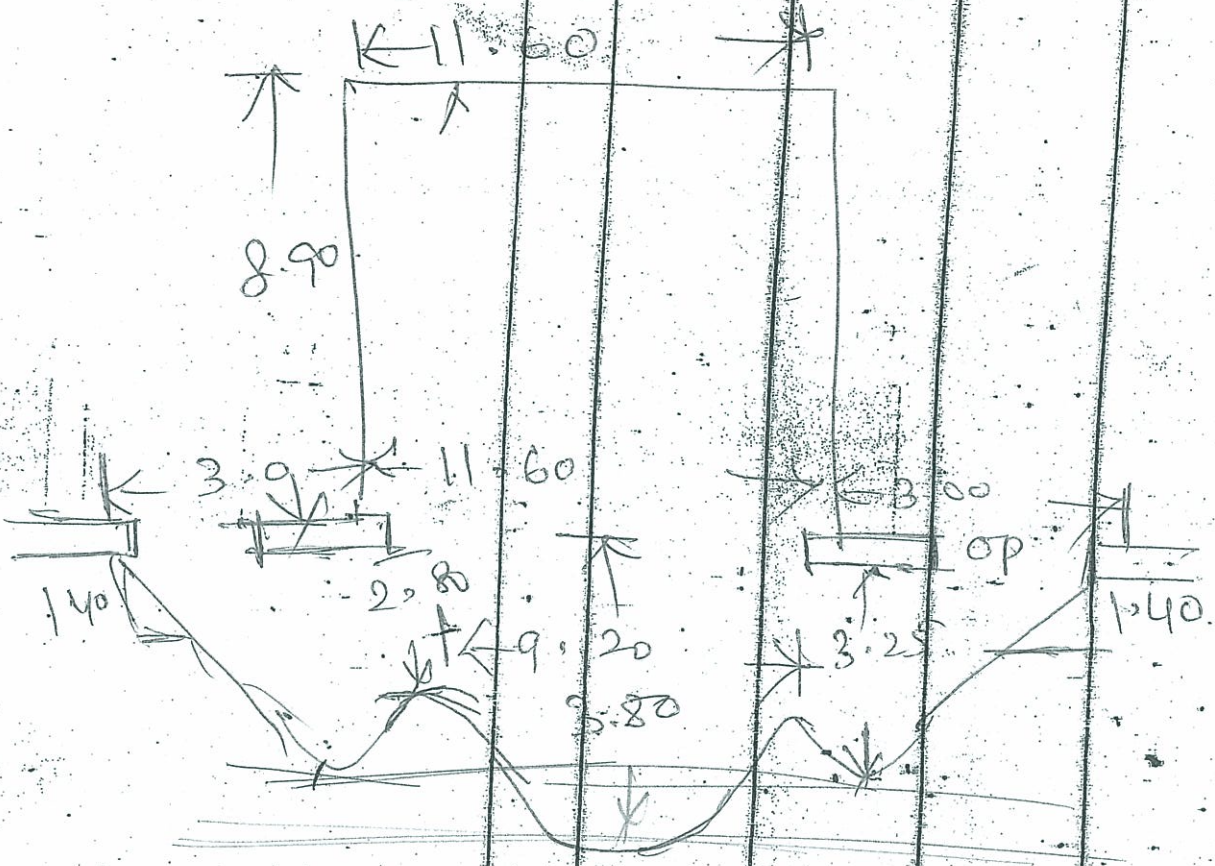
U
(2)

D
(6)

Quantity

(7)

Shage flooring



Wooden flooring $11.60 \times 8.90 = 103.44$

$$3.0 + 11.60 + 3.0 = 17.60$$

$$\frac{(1.40 + 3.25 + 3.0 + 2.8) \times 2.81}{4} = 49.46$$

152.70m

12.40L

Corbel area weldmesh fixing

Description No. MEASUREMENT

Description	No.	L (m)	U (m)	D (m)	Quantity
Top side hwp (R) $(2.20 + 2.40) \div 2 = 2.30$ $2.30 \times 4.00 \times 4.00 (1.00 \text{ Add})$	1				X 2 Nos
2					= 36.00-
East side New Staircase ↗	1	$1.50 + 2.10 = 3.60$		4.00	= 7.20-
2					= 7.40 =
New side arch	3	$1.50 + 2.00 = 3.50$		4.00	= 6.00-
New square staircase	4	$1.00 + 1.20 = 2.20$		4.00	= 4.40
2					
W.B. side New side concrete		$1.10 \times 4.00 = 3.50$			= 4.40
					6.20
					70.00 m ²
					X 500 6.70-
					33.000-

15
 15
 8
 15

Description

No.

MEASUREMENT

Quantity

(2)

(1)

L (4)

U (5)

D (6)

(7)

0.90 x 0.90
0.90 x 0.90

D7 = 0.90 x 1.95

D8 = 0.90 x 2.60

D9 = 1.20 x 2.00

D10 = 1.20 x 2.60

D2 = 2.10 x 2.65

D1 = 2.10 x 2.65

only shutter
D12 = 2.00 x 2.20

h x 2.75 x 4.00

with frame
D11 = 2.00 x 2.20

opening
0.90 x 0.90m

opening
0.90 x 0.90m

55.00 x 75W

= 4,12,500/-

D14 = 1.80 x 2.40 (W)

4.40 - D11 = 2 x 2.20

5.57 - D1 = 2.10 x 2.65

2.34 - D5 = 0.90 x 2.60

2.52 - D3 = 0.90 x 2.65

8.52 - D4 = 0.95 x 2.65

1.76 - D6 = 0.90 x 1.95

19.11 x 38.22

38.22 - D3 = 2.70 x 4.00

11.00

4.32 - D14 = 1.80 x 2.40

53.51

33

Description (2)	No. (3)	MEASUREMENT			Quantity
		L (4)	U (5)	D (6)	

<p>Neunung</p> <p>Fond ①</p> <p></p> <p>Proferti</p> <p>Fond ref ②</p>	$\frac{14+10}{2} \times 8$ $2 \times 4.30 \times 6.00$ $2 \times 6.00 \times 6.00$ 6×2.10 $2 \times 6.60 \times 10.00$ <p>non</p>	$= 96.80$ $= 51.60$ $= 72.00$ $= 12.60$ $= 132.00$ <hr/> 365.00 <hr/> 35 <hr/> 400.00
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Description

(2)

No.
(1)

MEASUREMENT

L
(ft)

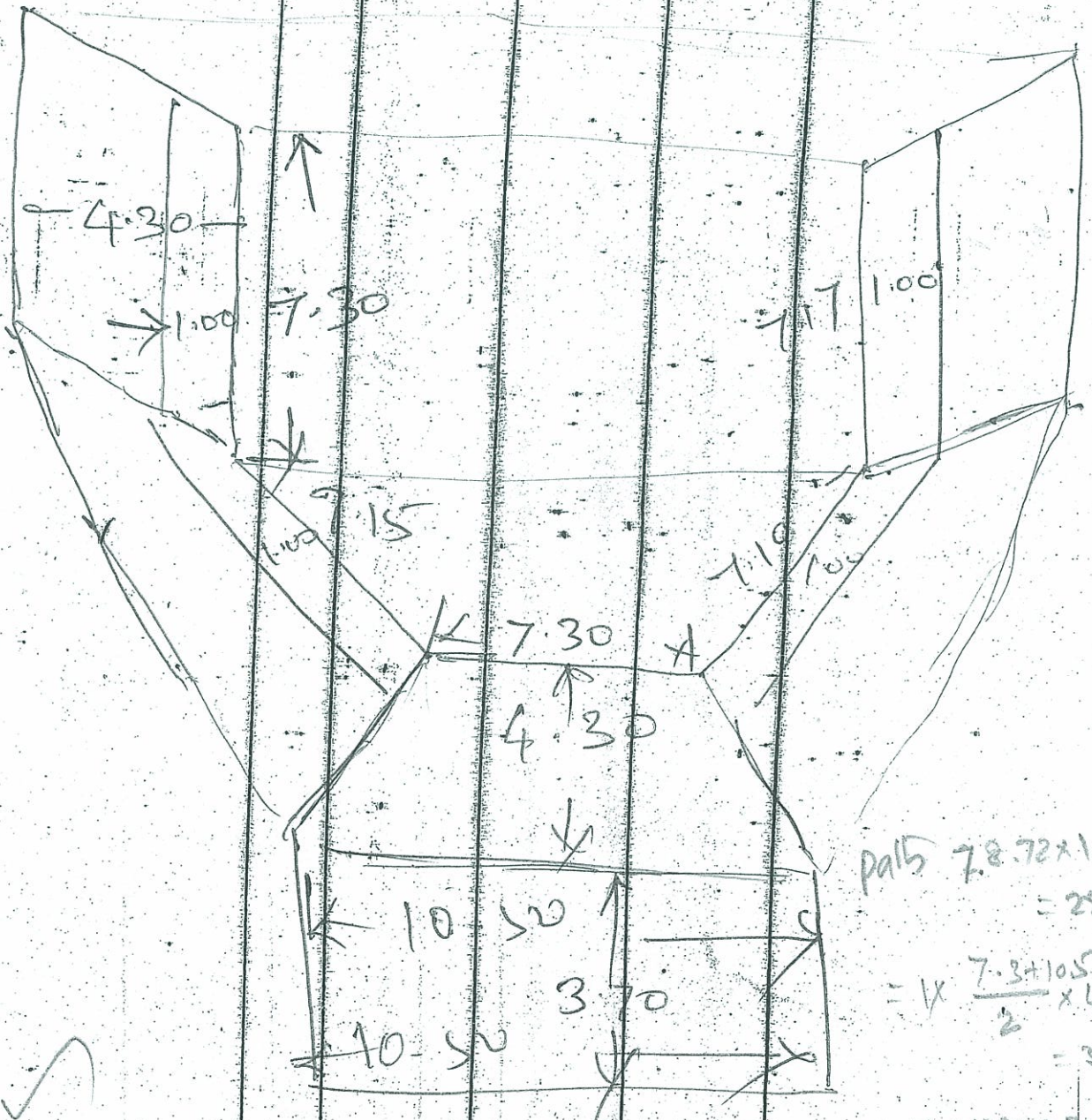
U
(ft)

D
(ft)

Quantity

sq

Mezzanine floor



Part 5 7.872×1.00
= 28.7

= $\frac{7.3 + 10.5}{2} \times 4.30$
= 38.2

= 10.50×3.70
= 38.85

= 99.5

36

Green Brown area

Description

(2)

No.

(1)

MEASUREMENT

L

(4)

U

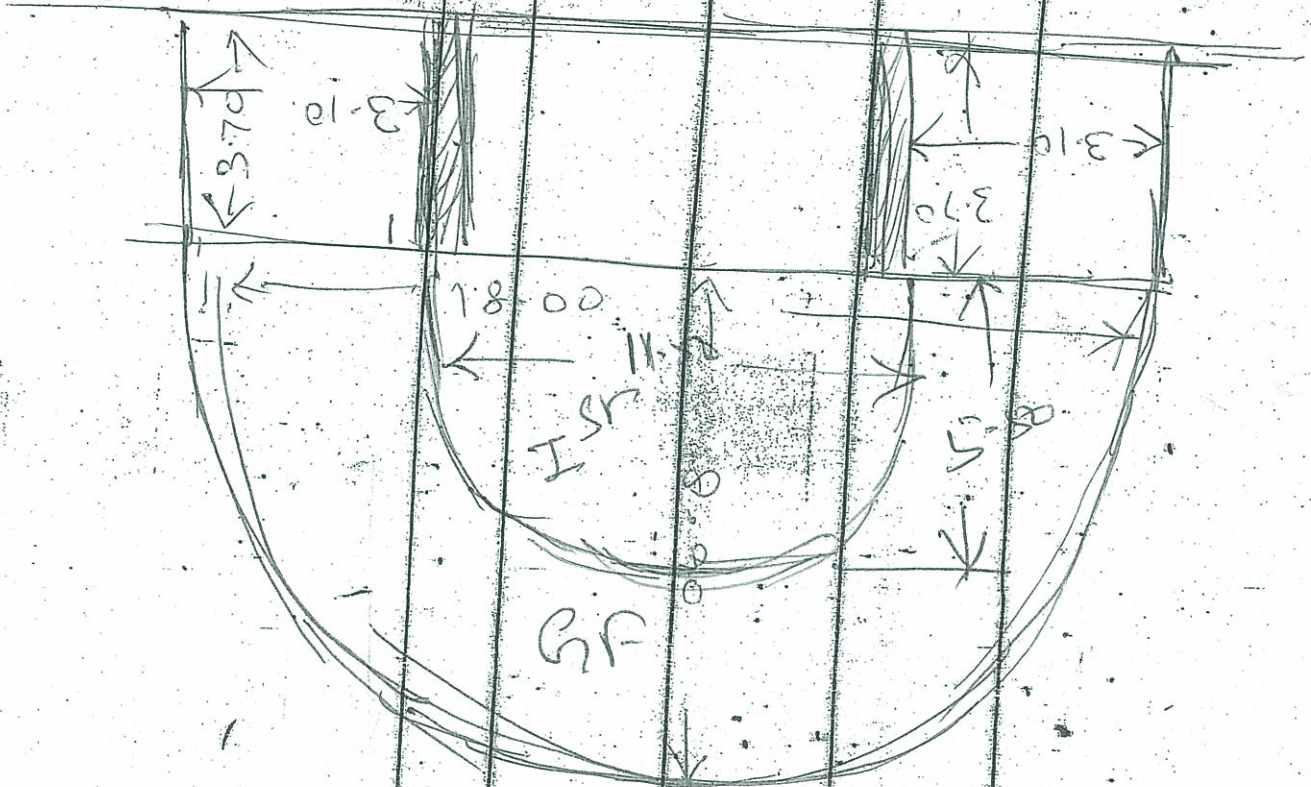
(3)

D

(6)

Quantity

(7)



8.92
1.70
7.22

Green form = $2 \times 3.10 \times 3.70$

$\frac{\pi}{2} \times \frac{\pi}{42} \times 18^2$

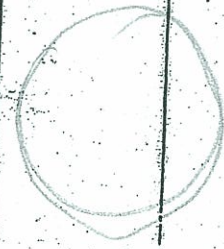
22.94

27.23

~~508.9~~

~~531.81~~

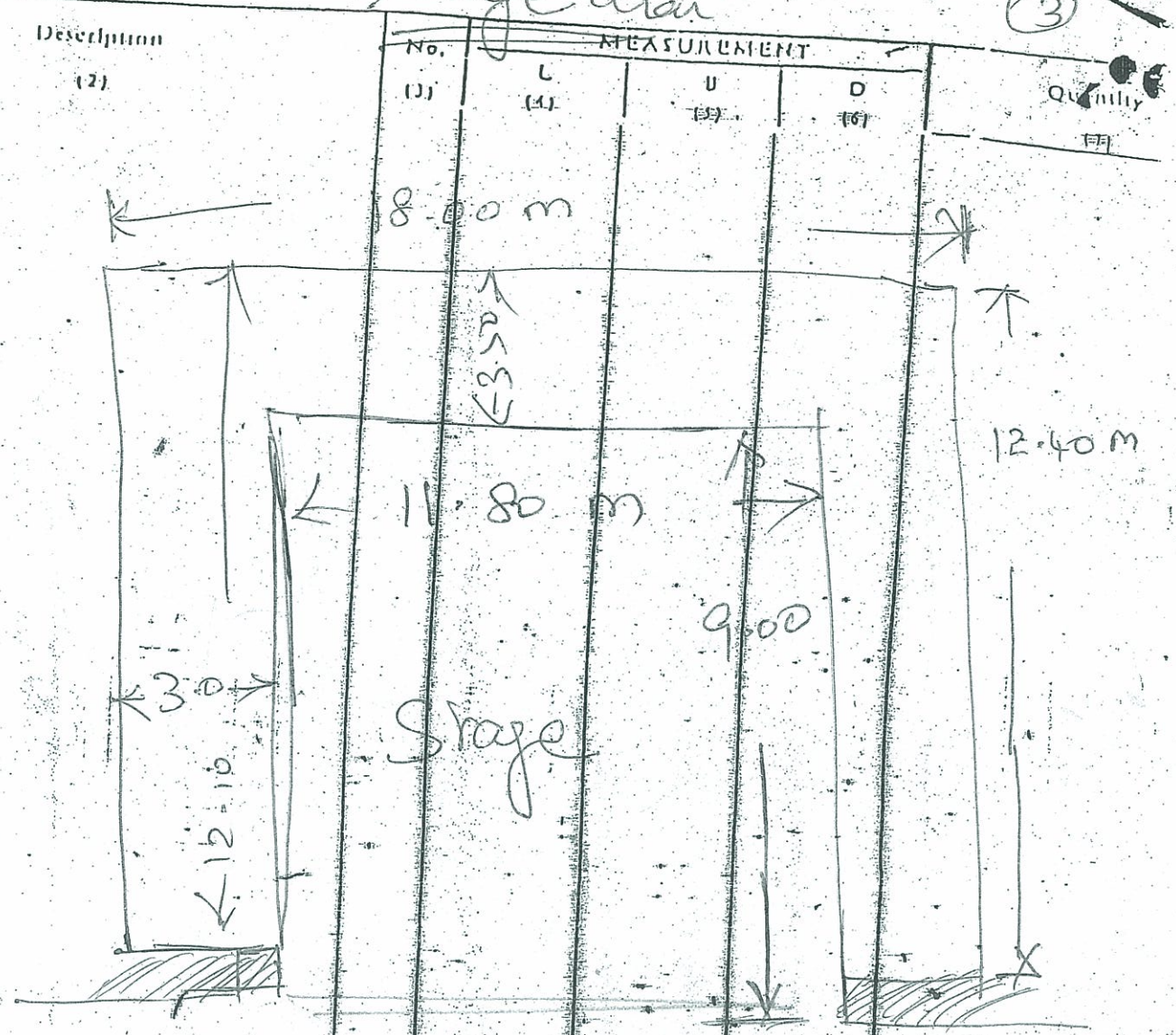
150.17 ✓



37

Stage area

(3)



Area = 18 x 12.40
 = 223.20
 Stage = (-) 106.20
 = 117.00

38

2

Description

(2)

Front entrance

No.

(1)

MEASUREMENT

L

(4)

B

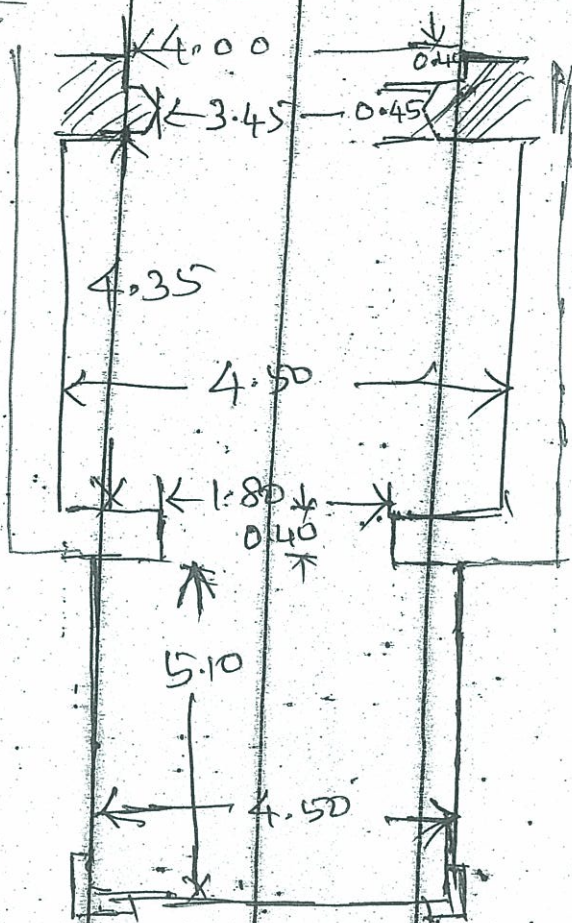
(5)

D

(6)

Quantity

(7)



Area 1 -	4.50 x 5.10	22.95
Wall	1.80 x 0.40	0.72
Area 1 -	4.50 x 4.35	19.58
Wall	4.00 x 0.40	1.60
Wall	3.45 x 0.45	1.55
		<u>46.40</u>

39

Description

(2)

No.

(3)

MEASUREMENT

L

(4)

B

(5)

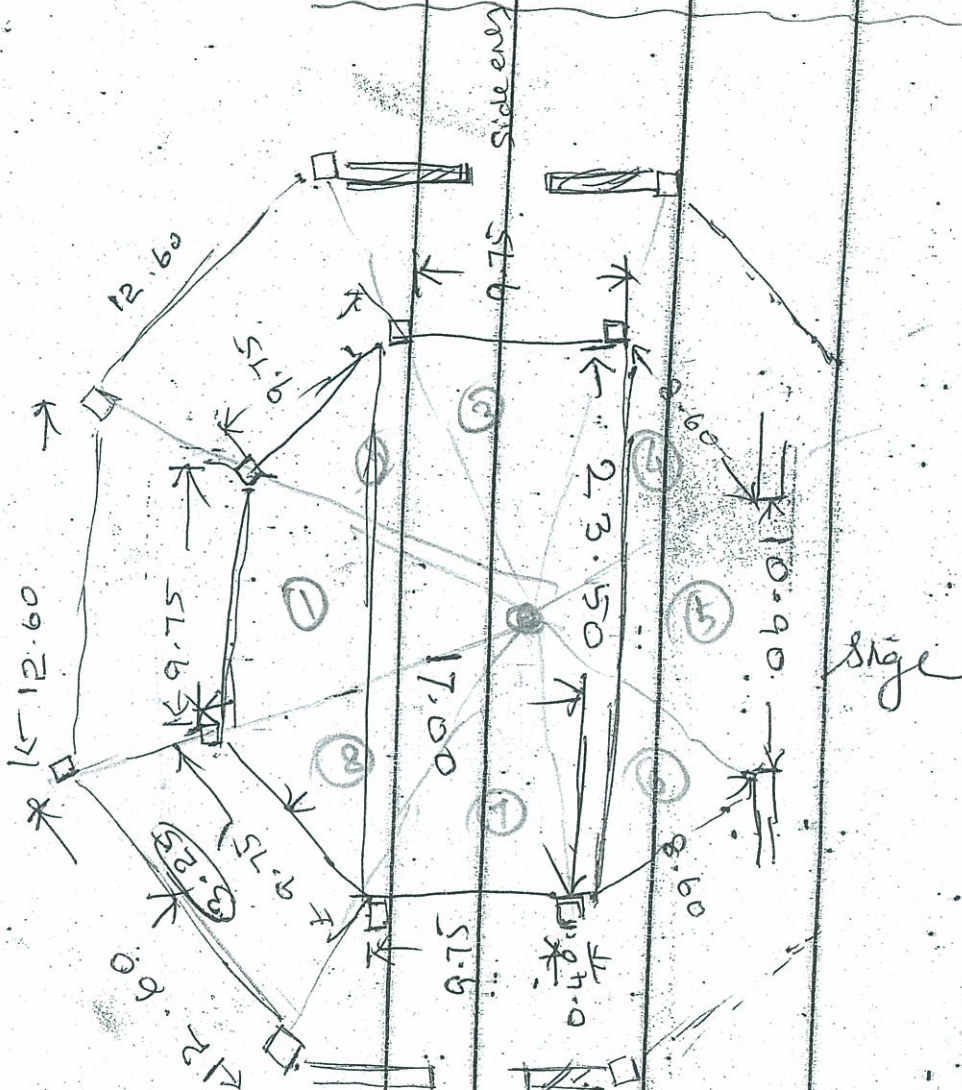
D

(6)

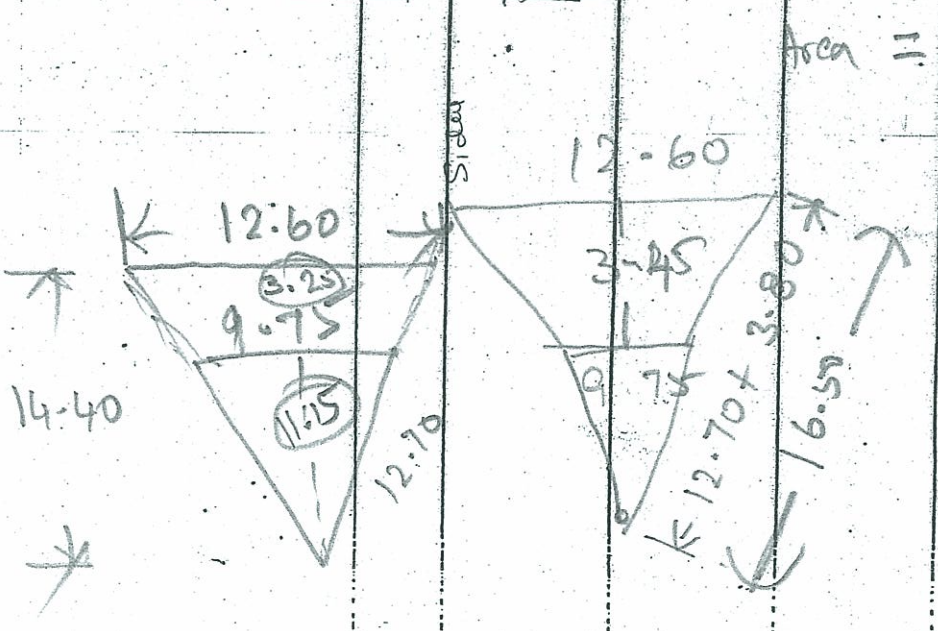
Quantity

(7)

Koolhambalam well area



Stage



$$\text{Area} = 8 \times 6.30 \times 14.40 = 7.2576 \text{ m}^2$$

Total Amount
 up to p/c (5)
 1139.17
 60.83
 1200.00 m²

(90)

Name of Work: Daily labour engaged in the Rukmini Arangam - civil work and stage arrangement work

Sl. No.	Name of the worker	Category	Day							Total no. of days worked	Wages /per day in Rs.	Total amount in Rs.	Signature of the worker	
			Date	Mon	Tues	Wed	Thurs	Fri	Sat					
1	C.Mahendran	Assv/eie	11.2.13	1	1	1	1	1	1	1	6	300	1800	
2	P.Natarajan	M/c		1	1	1	1	1	1	1	6	300	1800	
3	K.Durai	M/c		1	1	1	1	1	1	1	6	300	1800	
	Total			3	3	3	3	3	3	3	18		5400	

Rupees Five thousand four hundred only)

The Attendance on the above labourers was verified with the security personnel at the main gate entry. The above labourers have been engaged for above mentioned work as requested and their work have been found satisfactory during the period .

EO

AO

CAO

Director in- charge.

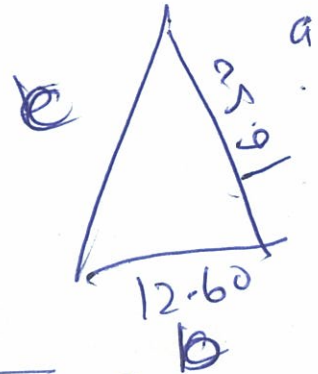
Isosceles triangle

$$96.074 \\ \times 8 = \underline{\underline{768.592 \text{ m}^2}}$$

$$\text{Area} = K = \frac{\text{base} \times \text{height}}{2}$$

$$\text{height} = \frac{2 \times K}{\text{base}}$$

$$K = \frac{b \sqrt{4a^2 - b^2}}{4}$$



$$K = \frac{12.60 \sqrt{4(16.50)^2 - 12.60^2}}{4}$$

$$K = \sqrt{1089 - 158.76}$$

$$K = 12.60 \sqrt{\frac{930.24}{4}}$$
$$30.50$$
$$\frac{4}{4}$$

$$12.60 \times 7.62$$

$$= 96.074 \checkmark$$

Koothambalam - Physical measurement details

44

Code	Description	Unit	Quantity	Rate	Amount
0115	Coolie	Day	1.50	135.25	202.88
0130	Mistry	Day	0.10	151.50	15.15
9999	Sundries such as fuel, kerosene oil, sand paper	L.S.	80.73	1.00	80.73
	TOTAL				3 037.52
	Add 1% for water charges				30.38
	TOTAL				3 067.90
	Add 10% for contractor's profit and overheads				460.18
	Cost for 1 sqm.				3 528.08
	Say				3 528.10

11.35 : Providing and fixing M.S. angle 50x50x5 mm to act as nosing with lugs of M.S. flat 10x5 mm 10cm long forked at end 60cm apart (minimum three lugs to be provided) including necessary welding and applying a priming coat of approved primer on exposed surface etc. complete.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 3m (15.39+0.2kg=15.63kg)				
	Materials-				
	angle iron 50x50x5 mm +3m				
	Add wastage @ 5% +0.15m				
	Total = 3.15m @ 5.13kg per m +16.16 kg				
	Say 0.162 qntl				
1007	Angle iron	quintal	0.162	3100.00	502.20
	Lugs 10x5 mm flat +6x0.10+0.60.@0.40 kg per m = 0.24 kg				
	Add wastage @ 5% = 0.012 kg				
1008	M.S. flats (Total 0.252 kg or 0.0025 qtl)	quintal	0.0025	2900.00	7.25
2205	Carriage of steel	tonne	0.016	47.29	0.76
1215	Welding charges 6cm (lugs) by electrical plant	cm	6.00	1.00	6.00
9999	Sundries	L.S.	9.10	1.00	9.10
	Labour-				
0103	Blacksmith 2nd class	Day	0.09	141.60	12.74
0123	Mason 1st class	Day	0.45	151.50	68.18
0114	Beldar	Day	0.25	135.25	33.81
	(A) Priming coat 3x0.20=0.60sqm (Rate as per item no 13.50.3)	sqm	0.60	12.65	7.59
	TOTAL				647.63
	Add for water charges @ 1% on all except on (A)				6.40
	TOTAL				654.03
	Add for contractor's profit and overheads @15% on all except on (A)				96.97
	Cost for 15.63 kg				751.00
	Cost per 1 kg				48.05
	Say				48.05

45

11.33: 25mm wooden planking, tongued and grooved in flooring including fixing with iron screws complete with :

11.33.2: Second class deodar wood

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 2.5x4=10 sqm. Materials- First class deodar wood planks No of joints = $4000/138 = 28.97$ = (29-1) = 28nos Qty of wood required $2.5(4+0.336) \times 0.025 = 0.271$ cum Add wastage @ 10 % = 0.027 cum = 0.2981 cum = 298.10 cudm -				
1194	First class deodar wood planks	10 cudm	298.10	335.00	9 986.35
2500	Extra for selected planks	10 cudm	298.10	59.00	1 758.79
2204	Carriage of timber	cum	0.2981	60.81	18.13
682	Iron screws 50 mm (slotted counters sunk head type)	100 Nos	200	40.00	80.00
	Labour-				
0111	Carpenter 1 st class	Day	2.16	151.50	327.24
0114	Beldar	Day	1.08	135.25	146.07
9999	Sundries for glue etc.	L.S.	26.91	1.00	26.91
	TOTAL				12 343.49
	Add 1 % for water charges				123.43
	TOTAL				12 466.92
	Add 15% for contractor's profit and overheads				1 870.04
	Cost for 10 sqm.				14 336.96
	Cost for 1 sqm.				1 433.70
	Say				1 433.70

50/11-22
+07.75228

11.34: 38mm thick wood block flooring of first class teak wood laid over 25mm thick levelling layer of cement concrete 1:2:4 (1 cement: 2 coarse sand : 4 graded stone aggregate 10mm nominal size) to be paid separately coated with a thin layer of hot bitumen (blown type) @ 2.45 kg per sqm. including fixing blocks in position after dipping in hot bitumen (blown type) upto half depth, planed, levelled smooth and finished complete.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 1 sqm. Bitumen blown type i) For bed layer @ 2.45kg/sqm. = 2.45kg+ ii) For dipping blocks L.S. = 2.00Kg. = 4.45kg.				
0313	Bitumen blown type	tonne	0.0044	25000.00	110.00
2211	Carriage of bitumen	tonne	0.0044	53.21	0.23
	1st class teak wood in scantling for wooden blocks 1 sqm x 0.038 m = 0.038 cum Add 10 % wastage = 0.0038 cum Total = 0.0418 cum or 41.80 cudm				
1187	1 st class teak wood in scantling for wooden blocks	10 cudm	41.80	492.00	2 056.56
2204	Carriage of timber	cum	0.0418	60.81	2.54
	Labour-				
0111	Carpenter 1st class	Day	1.75	151.50	265.12
0114	Beldar	Day	2.25	135.25	304.31

46

Code	Description	Unit	Quantity	Rate	Amount
0123	Mason 1st class	Day	3.90	151.50	590.85
0100	Bandhani	Day	1.10	138.45	152.30
0115	Coolie	Day	1.40	135.25	189.35
0101	Bhisti	Day	0.55	138.45	76.15
9999	Sundries	L.S.	26.91	1.00	26.91
	Labour for rubbing of stone				85.56
0139	Beldar for rubbing (special rate)	Day	0.618	138.45	197.60
0013	Machine	Day	0.988	200.00	3328.88
	TOTAL				3328.88
	Add for water charges @ 1%				33.29
	TOTAL				3362.17
	Add for contractor's profit and overheads @ 15%				504.33
	Cost for 10 sqm.				3866.50
	Cost for 1 sqm.				386.65
	Say				386.65

11.30: 40 mm thick rubbed stone flooring over 20 mm (average) thick base of cement mortar 1:5 (1 cement :5 coarse sand) with joints 3mm thick, side buttered with cement mortar 1:2 (1 cement : 2 stone dust) admixed with pigment to match the shade of stone and pointing with same mortar

11.30.2: White sand stone

Code	Description	Unit	Quantity	Rate	Amount
1165	Details of cost for 10sqm. Materials Finished work 10 sqm Add wastage 10%= 1.00 sqm Total = 11.00 sqm White sand stone slab 40 mm thick (un-dressed)	sqm	11.00	140.00	1540.00
9999	Carriage	L.S.	34.06	1.00	34.06
	Cement Mortar 1:5(1 Cement: 5 Coarse sand) Rate as per item No. 3.10 (i) for bedding = 0.224 cum+ (ii) for joining = 0.026 cum. Total=0.250cum. Cement mortar 1:2(1 Cement: 2 stone dust) for pointing Rate as per item No. 3.12	cum	0.25	2260.15	565.04
	Labour-				91.06
0123	Mason 1 st class	Day	3.90	151.50	590.85
0100	Bandhani	Day	1.10	138.45	152.30
0115	Coolie	Day	1.40	135.25	189.35
0101	Bhisti	Day	0.55	138.45	76.15
9999	Sundries	L.S.	26.91	1.00	26.91
	Labour for rubbing of stone				85.56
0139	Beldar for rubbing (special rate)	Day	0.618	138.45	197.60
0013	Machine	Day	0.988	200.00	3548.88
	TOTAL				3549
	Add for water charges @ 1%				3584.37
	TOTAL				537.66
	Add for contractor's profit and overheads @ 15%				4 122.03
	Cost for 10sqm.				412.20
	Cost for 1sqm.				412.20
	Say				412.20

11.31: Extra for pre finished nosing in treads of Kota stone/ sand stone slab.

Code	Description	Unit	Quantity	Rate	Amount
0126	Details of cost for 10m Labour- Stone mason (ornamental) TOTAL Add 1 % for water charges TOTAL Add 15% for contractor's profit and overheads TOTAL Cost for 10 sqm. Cost for 1 sqm. Say	Day	1.5	151.50	227.25 227.25 2.27 229.52 34.43 263.95 236.95 26.40 26.40

11.32: Extra for Kota stone/ sand stone in treads of steps and risers using single length upto 1.05 metre .

Code	Description	Unit	Quantity	Rate	Amount
0124	Details of cost for 10sqm. Labour- Mason 2nd class	Day	0.20	141.60	28.32
0114	Beldar	Day	0.20	135.25	27.05
	TOTAL				55.37
	Add 1 % for water charges				0.55
	TOTAL				55.92
	Add 15% for contractor's profit and overheads				8.39
	Cost for 10 sqm.				64.31
	Cost for 1 sqm.				6.43
	Say				6.45

11.33: 25mm wooden planking, tongued and grooved in flooring including fixing with iron screws complete with :

11.33.1: Second class teak wood

Code	Description	Unit	Quantity	Rate	Amount
1190	Details of cost for 2.5x4=10 sqm. Materials-Second class Indian teak wood No of joints = 4000/138 = 28.97 = (29-1) = 28nos Qty of wood required 2.5(4+0.336)x0.025 = 0.271 cum Add wastage @ 10 % = 0.027 cum = 0.2981 cum = 298.1 cudm	10 cudm	298.10	410.00	12222.10
1231	Second class indian teak wood	10 cudm	298.10	72.00	2146.32
2204	Extra for selected planks	cum	0.29810	60.81	18.13
0682	Carriage of timber Iron screws 50 mm (slotted counters sunk head type)	100 Nos	200	40.00	80.00
	Labour-				406.02
0111	Carpenter 1 st class	Day	2.68	151.50	182.59
0114	Beldar	Day	1.35	135.25	182.59
9999	Sundries for glue etc.	L.S.	33.28	1.00	33.28
	TOTAL				15088.44
	Add 1% for water charges				150.88
	TOTAL				15239.32
	Add 15 % for contractor's profit and overheads				2285.90
	Cost for 10 sqm.				17525.22
	Cost for 1 sqm.				1752.52
	Say				1752.50

Wooden Flooring

47

12.48 Providing & fixing on roof pressed clay tile (Mangalor tile of 20 mm nominal thickness and of approved size and as per approved pattern steel frame work complete (steel frame work to be paid separately)

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 sqm				
	Materials				
8670	Manglore tiles 20 mm thick.	each	160	9.50	1520.00
2207	Carriage of tiles	1000 Nos	160	85.13	13.62
	Labour				
0123	Mason 1st class	Day	0.30	151.50	45.45
0114	Beldar	Day	1.56	135.20	210.99
9999	Sundries	L.S	13.00	1.00	13.00
	Total				1803.06
	Add 1% for water charges				18.03
	Total				1821.09
	Add 15% for contractor's profit and overheads				273.16
	Cost for 10 sqm				2094.25
	Cost for 1 sqm				209.43
	Say				209.40

12.49 Providing & laying on roof pressed clay tile ridge (Mangalore tile) of 20mm thickness and of approved pattern on steel frame work complete (steel frame work to be paid separately)

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 3.60 metre				
	Materials				
8669	Manglore ridge tiles 20 mm thick	each	12	25.00	300.00
2207	Carriage of tiles	1000 Nos	12	85.13	1.02
	Labour				
0123	Mason 1st class	Day	0.01	151.50	1.52
0114	Beldar	Day	0.15	135.25	20.29
9999	Sundries	L.S	2.60	1.00	2.60
	Total				325.43
	Add 1% for water charges				3.25
	Total				328.68
	Add 15% for contractor's profit and overheads				49.30
	Cost for 3.60 sqm				377.98
	Cost for 1 sqm				104.99
	Say				105.00

12.50 Providing and fixing precoated galvanized iron profile sheets (size, shape and pitch of corrugation as 5% total coated thickness (TCT), Zinc coating 120gsm as per IS: 277 in approved by Engineer-in-charge) 0.05 mm. 240 mpa mm steel grade, 5-7 microns epoxy primer on both side of the sheet and polyester top coat 15-18 microns. Sheet should have protective guard film of 25 microns minimum to avoid scratches while transportation and should be supplied in single length upto 12 metre or as desired by Engineer-in-charge. The sheet shall be fixed using self drilling /self tapping screws of size (5.5x 55mm) with EPDM seal or with polymer coated J or L hooks, bolts and nuts 8mm diameter with bitumen and G.I. limpet washers or with G.I. limpet washers filled with white lead complete upto any pitch in horizontal/ vertical or curved surfaces excluding the cost of purlins, rafters and trusses and including cutting to size and shape wherever required.

13.66 Floor Painting with floor enamel paint of approved brand and manufacture to give an even shade:
13.66.1 Two or more coats on new work

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm				
0831	MATERIALS	litre	1.48	100.00	148.00
9999	Floor enamel paint in all shades	L.S	1.43	1.00	1.43
9999	Carriage	L.S	5.33	1.00	5.33
	Putty etc				
0131	LABOUR	Day	0.54	141.60	76.46
0115	Painter (0.36+0.54=0.90)	Day	0.54	135.25	73.04
9999	Coolie (0.36+0.54=0.90)	Day	6.76	1.00	6.76
9999	Brushes, sand paper etc	L.S	8.06	1.00	8.06
	Sundries				
	TOTAL				319.08
	Add 1 % for water charges				3.19
	TOTAL				322.27
	Add 15% for contractor's profit and overheads				48.34
	Cost of 10.00 sqm				370.61
	Cost of 1.00 sqm				37.06
	Say				37.05

13.67 Varnishing with varnish of approved brand and manufacture:
13.67.1 Two or more coats of glue sizing with copal varnish over an under coat of flattening varnish.

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm				
0856	MATERIALS	litre	0.70	49.00	34.30
0763	Undercoat flattening varnish	kilogram	0.07	50.00	3.50
0857	Glue for sizing	litre	1.16	100.00	116.00
9999	Copal varnish	L.S	1.43	1.00	1.43
9999	Carriage	L.S	5.33	1.00	5.33
	Putty for repair to holes etc				
	LABOUR				
0131	Painter (0.36+0.54=0.90)	Day	0.90	141.60	127.44
0115	Coolie (0.36+0.54=0.90)	Day	0.90	135.25	121.72
9999	Brushes, sand paper etc	L.S	6.76	1.00	6.76
9999	Sundries	L.S	7.15	1.00	7.15
	TOTAL				423.63
	Add 1 % for water charges				4.24
	TOTAL				427.87
	Add 15% for contractor's profit and overheads				64.18
	Cost of 10.00 sqm				492.05
	Cost of 1.00 sqm				49.21
	Say				49.20

13.67 Varnishing with varnish of approved brand and manufacture:
13.67.2 Two or more coats glue sizing with spar varnish or an under coat of flattening varnish.

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm				
0856	MATERIALS	litre	0.70	49.00	34.30
0763	Ordinary varnish	kilogram	0.07	50.00	3.50
0858	Glue	litre	1.26	105.00	132.30
9999	Superior spar varnish	L.S	1.43	1.00	1.43
9999	Carriage	L.S	2.73	1.00	2.73
	Repair etc				
	LABOUR				
0131	Painter (0.36+0.54=0.90)	Day	0.90	141.60	127.44
0115	Coolie (0.36+0.54=0.90)	Day	0.90	135.25	121.72
9999	Brushes, sand paper etc	L.S	6.76	1.00	6.76
9999	Sundries	L.S	7.15	1.00	7.15
	TOTAL				437.33
	Add 1 % for water charges				4.37
	TOTAL				441.70
	Add 15% for contractor's profit and overheads				66.26
	Cost of 10.00 sqm				507.96
	Cost of 1.00 sqm				50.80
	Say				50.80

13.68 French spirit polishing:
13.68.1 Two or more coats on new works including a coat of wood filler.

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm				
1000	MATERIALS	litre	1.63	37.00	60.31
9999	Spirit	kilogram	7.15	1.00	7.15
9999	Pigment	litre	0.24	192.00	46.08
9999	Shellac	L.S	2.73	1.00	2.73
9999	Carriage of material	L.S	16.12	1.00	16.12
9999	White woolen cloth, putty	L.S	13.39	1.00	13.39
9999	Sand paper cotton etc	L.S	1.43	1.00	1.43
	Lineseed oil				
	LABOUR				
0131	Painter (0.36+0.54=0.90)	Day	3.50	141.60	495.60
9999	Coolie (0.36+0.54=0.90)	Day	8.06	1.00	8.06
	Sundries	L.S			
	TOTAL				650.87
	Add 1 % for water charges				6.51
	TOTAL				657.38
	Add 15% for contractor's profit and overheads				98.61
	Cost of 10.00 sqm				755.99
	Cost of 1.00 sqm				75.60
	Say				75.60

13.69 Polishing on wood work with ready made wax polish of approved brand and manufacture:
13.69.1 New work

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm				
	MATERIALS				

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Code	Description	Unit	Quantity	Rate	Amount
	TOTAL				304.48
	Add 1% for water charges				3.04
	TOTAL				307.52
	Add 15% for contractor's profit and overheads				46.13
	Cost of 10.00 sqm				353.65
	Cost of 1.00 sqm				35.37
	Say				35.35

13.62 Painting with synthetic enamel paint of approved brand and manufacture of required colour to give an even shade:

13.62.1 Two or more coats on new work over an under coat of suitable shade with ordinary paint of approved brand and manufacture.

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm				
0823	MATERIALS	litre	0.75	72.00	54.00
9999	Primer	L.S	2.73	1.00	2.73
9999	Putty	L.S	0.39	1.00	0.39
	CARRIAGE				
0131	LABOUR	Day	0.25	141.60	35.40
0115	Painter	Day	0.25	135.25	33.81
9999	Coolie	L.S	5.33	1.00	5.33
9999	Brushes, sand paper etc	L.S	10.79	1.00	10.79
	Sundries				
	TOTAL				133.40
0833	MATERIALS	litre	1.16	115.00	1.43
9999	Enamel paint	L.S	1.43	1.00	1.43
	CARRIAGE OF PAINT AND MATERIAL				
0131	LABOUR	Day	0.54	141.60	76.46
0115	Painter	Day	0.54	135.25	73.04
9999	Coolie	L.S	6.76	1.00	6.76
9999	Brushes, sand paper etc	L.S	8.06	1.00	8.06
	Sundries				
	TOTAL				441.60
	Add 1% for water charges				4.42
	TOTAL				446.02
	Add 15% for contractor's profit and overheads				66.90
	Cost of 10.00 sqm				512.92
	Cost of 1.00 sqm				51.29
	Say				51.30

13.63 Painting with aluminium enamel paint of approved brand and manufacture to give an even shade:

13.63.1 Two or more coats on new work

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm				
0826	MATERIALS	litre	0.80	89.00	71.20
9999	Aluminium paint	L.S	1.43	1.00	1.43
9999	CARRIAGE OF PAINT AND MATERIAL	L.S	5.33	1.00	5.33
	Putty etc				
	LABOUR				

Code	Description	Unit	Quantity	Rate	Amount
0131	Painter	Day	0.54	141.60	76.46
0115	Coolie	Day	0.54	135.25	73.04
9999	Brushes, sand paper etc	L.S	6.76	1.00	6.76
9999	Sundries	L.S	11.96	1.00	11.96
	TOTAL				246.18
	Add 1% for water charges				2.46
	TOTAL				248.64
	Add 15% for contractor's profit and overheads				37.30
	Cost of 10.00 sqm				285.94
	Cost of 1.00 sqm				28.59
	Say				28.60

13.64 Painting with acid proof paint of approved brand and manufacture to give an even shade:

13.64.1 Two or more coats on new work

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm				
0827	MATERIALS	litre	1.16	93.00	107.88
9999	Acid proof paint	L.S	1.43	1.00	1.43
9999	CARRIAGE OF PAINT	L.S	5.33	1.00	5.33
	Putty etc				
0131	LABOUR	Day	0.54	141.60	76.46
0115	Painter	Day	0.54	135.25	73.04
9999	Coolie	Day	6.76	1.00	6.76
9999	Brushes, sand paper etc	L.S	8.06	1.00	8.06
	Sundries				
	TOTAL				278.96
	Add 1% for water charges				2.79
	TOTAL				281.75
	Add 15% for contractor's profit and overheads				42.26
	Cost of 10.00 sqm				324.01
	Cost of 1.00 sqm				32.40
	Say				32.40

13.65 Painting with black anti-corrosive bitumastic paint of approved brand and manufacture to give an even shade:

13.65.1 Two or more coats on new work

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm				
0828	MATERIALS	litre	0.95	52.00	49.40
9999	Black anticorrosive bitumastic paint	L.S	1.43	1.00	1.43
	CARRIAGE				
0131	LABOUR	Day	0.54	141.60	76.46
0115	Painter	Day	0.54	135.25	73.04
9999	Coolie	Day	6.76	1.00	6.76
9999	Putty, brushes, sand paper etc	L.S	5.33	1.00	5.33
	Sundries	L.S	8.06	1.00	8.06
	TOTAL				213.72
	Add 1% for water charges				2.14
	TOTAL				215.86
	Add 15% for contractor's profit and overheads				32.38
	Cost of 10.00 sqm				248.24
	Cost of 1.00 sqm				24.82
	Say				24.80

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13.57 Painting with oil type wood preservative of approved brand and manufacture:
13.57.1 New work (Two or more coats)

Code	Description	Unit	Quantity	Rate	Amount
0859	Detail of cost for 10 sqm	litre	1.00	6.00	60.00
9999	MATERIALS	L.S	0.52	1.00	0.52
0131	Oil type wood preservative	Day	0.15	141.60	21.24
9999	Carriage of material	Day	0.15	135.25	20.29
9999	Painter	L.S	4.16	1.00	4.16
9999	Coolie	L.S	3.90	1.00	3.90
	Brushes etc				
	Sundries				
	TOTAL				110.11
	Add 1 % for water charges				1.10
	TOTAL				111.21
	Add 15% for contractor's profit and overheads				16.68
	Cost of 10.00 sqm				127.89
	Cost of 1.00 sqm				12.79
	Say				12.80

13.58 Providing and applying two coats of fire retardant paint unthinned on cleaned wood/
ply surface @ 3.5 sqm per litre per coat including preparation of base surface as per
recommendations of manufacturer to make the surface fire retardant.

Code	Description	Unit	Quantity	Rate	Amount
7240	Detail of cost for 10 sqm	litre	5.70	318.00	1,812.60
9999	MATERIALS	L.S	1.43	1.00	1.43
0131	Fire retardant paint	Day	0.54	141.60	76.46
0114	Carriage of material	Day	0.54	135.25	73.04
9999	Painter	L.S	6.76	1.00	6.76
9999	Putty, brushes, sand paper etc	L.S	8.06	1.00	8.06
	Sundries				
	TOTAL				1,978.35
	Add 1 % for water charges				19.78
	TOTAL				1,998.13
	Add 15% for contractor's profit and overheads				299.72
	Cost of 10.00 sqm				2,297.85
	Cost of 1.00 sqm				229.79
	Say				229.80

13.59 Coal tarring two coats on new work using 0.16 and 0.12 litre coal tar per sqm in the
first coat and second coat respectively.

Code	Description	Unit	Quantity	Rate	Amount
9999	Detail of cost for 10 sqm	L.S	1.43	1.00	1.43
0324	MATERIALS	litre	2.80	16.00	44.80
9999	Lime	L.S	1.43	1.00	1.43
0771	Coal Tar	litre	0.50	19.00	9.50
	Carriage of material				
	Kerosene				

Pamley

13.60 Wall painting with plastic emulsion paint of approved brand and manufacture to
give an even shade

13.60.1 Two or more coats on new work-

Code	Description	Unit	Quantity	Rate	Amount
0835	Detail of cost for 10 sqm	litre	1.21	140.00	169.40
9999	MATERIALS	L.S	6.76	1.00	6.76
9999	Plastic emulsion paint	L.S	1.43	1.00	1.43
	Materials for filling in holes and cracks (putty etc)				
0131	Carriage of material	Day	0.54	141.60	76.46
0115	Painter	Day	0.54	135.25	73.04
9999	Coolie	L.S	10.79	1.00	10.79
9999	Brushes, sand paper etc	L.S	6.76	1.00	6.76
9999	Sundries				
	TOTAL				344.64
	Add 1 % for water charges				3.45
	TOTAL				348.09
	Add 15% for contractor's profit and overheads				52.21
	Cost of 10.00 sqm				400.30
	Cost of 1.00 sqm				40.03
	Say				40.05

13.61 Painting with synthetic enamel paint of approved brand and manufacture to give an
even shade:

13.61.1 Two or more coats on new work

Code	Description	Unit	Quantity	Rate	Amount
0833	Detail of cost for 10 sqm	litre	1.16	115.00	133.40
9999	MATERIALS	L.S	5.33	1.00	5.33
9999	Synthetic enamel paint	L.S	1.43	1.00	1.43
	Materials for filling in holes and cracks (putty etc)				
0131	Carriage	Day	0.54	141.60	76.46
0115	LABOUR	Day	0.54	135.25	73.04
9999	Painter	L.S	6.76	1.00	6.76
9999	Coolie	L.S	8.06	1.00	8.06
	Brushes, sand paper etc				
	Sundries				

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13.3 20 mm cement plaster of mix**13.3.2 1:6 (1 cement : 6 fine sand)**

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm MATERIALS Cement mortar 1:6 (1 cement: 6 fine sand). (Rate as per item no. 3.6)	cum	0.224	1,687.70	378.04
	LABOUR				
0155	Mason	Day	0.94	146.55	137.76
0115	Coolie	Day	1.02	135.25	137.96
0101	Bhisti	Day	1.10	138.45	152.30
9999	Scaffolding and sundries	L.S	12.61	1.00	12.61
	TOTAL				818.67
	Add 1% for water charges				8.19
	TOTAL				826.86
	Add 15% for contractor's profit and overheads				124.03
	Cost of 10.00 sqm				950.89
	Cost of 1.00 sqm				95.09
	Say				95.10

13.4 12 mm cement plaster of mix**13.4.1 1:4 (1 cement : 4 coarse sand)**

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm MATERIALS Cement mortar - 1:4 (Rate as per item no. 3.9)	cum	0.144	2,578.45	371.30
	LABOUR				
0155	Mason	Day	0.67	146.55	98.19
0115	Coolie	Day	0.75	135.25	101.44
0101	Bhisti	Day	0.92	138.45	127.37
9999	Scaffolding and sundries	L.S	12.61	1.00	12.61
	TOTAL				710.91
	Add 1% for water charges				7.11
	TOTAL				718.02
	Add 15% for contractor's profit and overheads				107.70
	Cost of 10.00 sqm				825.72
	Cost of 1.00 sqm				82.57
	Say				82.55

13.4 12 mm cement plaster of mix**13.4.2 1:6 (1 cement : 6 coarse sand)**

Code	Description	Unit	Quantity	Rate	Amount
	Detail of cost for 10 sqm MATERIALS Cement mortar -1:6 (Rate as per item no. 3.11)	cum	0.144	1987.30	286.17
	LABOUR				
0155	Mason	Day	0.67	146.55	98.19
0115	Coolie	Day	0.75	135.25	101.44
0101	Bhisti	Day	0.92	138.45	127.37
9999	Scaffolding and sundries	L.S	12.61	1.00	12.61

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**6.1 Brick work with F.P.S. bricks of class designation 75 in foundation and plinth in:
6.1.1 Cement mortar 1:4 (1 cement : 4 coarse sand)**

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 1 cum.				
	MATERIALS :				
2602	Bricks of class designation 75	1000 Nos	494.00	1 900.00	938.60
	Cement mortar 1:4 (Rate as per item No. 3.9)	cum	0.25	2 578.45	644.61
2201	Carriage of bricks	1000 Nos	494.00	141.88	70.09
9999	Sundries	L.S.	2.73	1.00	2.73
	LABOUR:				
0123	Mason 1st Class	Day	0.36	151.50	54.54
0124	Mason IInd Class	Day	0.36	141.60	50.98
0115	Coolie	Day	1.37	135.25	185.29
0101	Bhishti	Day	0.20	138.45	27.69
	TOTAL				1,974.53
	Add 1% for water charges				19.75
	TOTAL				1,994.28
	Add for contractor's profit and overheads @ 15%				299.14
	Cost of 1 Cum.				2,293.42
	Say				2,293.40

**6.1 Brick work with F.P.S. bricks of class designation 75 in foundation and plinth in:
6.1.2 Cement mortar 1:6 (1 cement : 6 coarse sand)**

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 1 cum.				
	MATERIALS :				
2602	Bricks of class designation 75	1000 Nos	494.00	1 900.00	938.60
	Cement mortar 1:6 (Rate as per item No. 3.11)	cum	0.25	1 987.30	496.82
2201	Carriage of bricks	1000 Nos	494.00	141.88	70.09
9999	Sundries	L.S.	2.73	1.00	2.73
	LABOUR:				
0123	Mason 1st Class	Day	0.36	151.50	54.54
0124	Mason IInd Class	Day	0.36	141.60	50.98
0115	Coolie	Day	1.37	135.25	185.29
0101	Bhishti	Day	0.20	138.45	27.69
	TOTAL				1,826.74
	Add 1% for water charges				18.27
	TOTAL				1,845.01
	Add for contractor's profit and overheads @ 15%				276.75
	Cost of 1 Cum.				2,121.76
	Say				2,121.75

**6.2 Brick work with modular bricks of class designation 75 in foundation and plinth in:
6.2.1 Cement mortar 1:4 (1 cement : 4 coarse sand)**

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 1 cum.				
	MATERIALS :				
7900	Modular bricks of class designation 75	1000 Nos	487.00	2 050.00	998.35
2201	Carriage of bricks	1000 Nos	487.00	141.88	69.10
	Cement mortar 1 :4 (1 cement : 4 coarse sand) (Rates as per item no. 3.9)	cum	0.22	2 578.45	567.26

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Code	Description	Unit	Quantity	Rate	Amount
0367	Portland Cement	tonne	0.0405	4500.00	182.25
2209	Carriage of white Cement	tonne	0.0405	47.29	1.92
0784	Marble powder	cum	0.007	800.00	5.60
0874	Dark shade pigmeny/3.5kg/ 50kg of cement = 40.5x3.5/50=2.84kg.	kilogram	2.84	42.00	119.28
9999	Carriage of pigment & marble powder etc. Labour:-	L.S.	3.64	1.00	3.64
0124	Mason 2nd class	Day	1.79	141.60	253.46
0114	Beldar	Day	1.99	135.25	269.15
0101	Bhisti	Day	1.04	138.45	143.99
0139	Skilled Beldar (for floor rubbing etc.)	Day	1.00	138.45	138.45
0127	Mixer operator	Day	0.03	151.50	4.54
0002	Mixer	Day	0.03	400.00	12.00
0013	Machine for rubbing of floors	Day	1.60	200.00	320.00
9999	Sundries	L.S.	161.46	1.00	161.46
	Total				2632.18
	Add for water charges @ 1% on 'A'				26.32
	Total				2658.50
	Add for contractor's profit and overheads @ 15% on A+B				398.78
	Cost of 10 sqm				3057.28
	Cost of 1 sqm				305.73
	Say				305.75

- 11.9 40 mm thick marble chips flooring rubbed and polished to granolithic finish, under layer 34 mm thick cement concrete 1:2:4 (1 cement: 2 coarse sand : 4 graded stone aggregate 12.5mm nominal size) and top layer 6mm thick with white, black, chocolate, grey, yellow or green marble chips of sizes from 1mm to 4mm nominal size laid in cement marble powder mix 3:1 (3 cement : 1 marble powder) by weight in proportion of 4:7 (4 cement marble powder mix : 7 marble chips) by volume including cement slurry etc. complete :
- 11.9.2 Light shade pigment with white cement.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10.0 sqm (A)Rate as per item no 11.9.1 of SH: Flooring Add difference of cost due to using light shade pigment instead of dark shade pigment	sqm	10	305.75	3057.50
0875	Add for light shade pigment	kilogram	2.84	65.00	184.60
0874	Deduct for dark shade pigment	kilogram	2.84	42.00	(-)119.28
	Add difference of cost due to using white cement instead of grey cement				
0368	Add for White Cement	tonne	0.0405	9700.00	392.85
0367	Deduct for grey cement	tonne	0.0405	4500.00	(-)182.25
	Total				3333.62
	Add 1 % for water charges except on 'A'				2.76
	Total				3336.38
	Add 15%-for contractor's profit and overhead except on 'A'				41.39
	Cost of 10 sqm				3377.77
	Cost of 1 sqm				337.78
	Say				337.80

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Code	Description	Unit	Quantity	Rate	Amount
0114	Beldar	Day	0.18	135.25	24.34
0101	Bhisti	Day	0.05	138.45	6.92
9999	Sundries	L.S.	19.76	1.00	19.76
	TOTAL				3 679.68
	Add for water charges @1% on all except 'A'				1.01
	TOTAL				3 680.69
	Add for contractor's profit and overheads @ 15% on all except 'A'				15.24
	Cost of 1 Cum.				3 695.93
	Say				3 695.95

11.8 Extra for making chequers of approved pattern on cement concrete floors, steps, landing, pavements etc.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 sqm.				
	Labour:-				
0124	Mason 2nd class	Day	0.36	141.60	50.98
0114	Beldar	Day	0.36	135.25	48.69
9999	Chequered plate etc.	L.S.	13.52	1.00	13.52
	TOTAL				113.19
	Add 1% for water charges				1.13
	TOTAL				114.32
	Add 15% contractor's profit and overheads				17.15
	Cost of 10 sqm.				131.47
	Cost of 1 sqm.				13.15
	Say				13.15

11.9 40 mm thick marble chips flooring rubbed and polished to granolithic finish, under layer 34 mm thick cement concrete 1:2:4 (1 cement: 2 coarse sand : 4 graded stone aggregate 12.5mm nominal size) and top layer 6mm thick with white, black, chocolate, grey, yellow or green marble chips of sizes from 1mm to 4mm nominal size laid in cement marble powder mix 3:1 (3 cement: 1 marble powder) by weight in proportion of 4:7 (4 cement marble powder mix : 7 marble chips) by volume including cement slurry etc. complete :

11.9.1 Dark shade pigment with ordinary cement.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 sqm				
	Materials				
	For under layer of 34mm thick				
0296	Stone Aggregate (Single size): 12.5 mm nominal size	cum	0.227	700.00	158.90
0297	Stone Aggregate (Single size): 10 mm nominal size	cum	0.076	700.00	53.20
2202	Carriage of Stone aggregate below 40 mm nominal size	cum	0.303	53.21	16.12
0982	Coarse sand (zone III)	cum	0.151	600.00	90.60
2203	Carriage of Coarse sand	cum	0.151	53.21	8.03
0367	Cement	tonne	0.109	4500.00	490.50
0367	Cement for slurry	tonne	0.02	4500.00	90.00
2209	Carriage of Cement	tonne	0.129	47.29	6.10
	For top layer 6mm thick				
0785	Marble chips	quintal	0.872	115.00	100.28
2268	Carriage of Marble chips	cum	0.051	53.21	2.71

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Redoxide Flooring

470

Code	Description	Unit	Quantity	Rate	Amount
0367	Cement for slurry	tonne	0.02	4500.00	90.00
2209	Carriage of cement	tonne	0.263	47.29	12.44
7254	Hardening compound	litre	2.44	29.00	70.76
9999	Carriage of handening compound	L.S.	2.73	1.00	2.73
	Labour				
0124	Mason 2nd class	Day	2.15	141.60	304.44
0114	Beldar	Day	1.86	135.25	251.57
0115	Coolie	Day	1.88	135.25	254.27
0101	Bhisti	Day	0.27	138.45	37.38
9999	Sundries	L.S.	53.82	1.00	53.82
	TOTAL				2743.47
	Add 1% for water charges				27.43
	TOTAL				2770.90
	Add 15% for contractor's profit and overheads				415.64
	Cost of 10 sqm.				3186.54
	Cost of 1 sqm.				318.65
	Say				318.65

11.6 Cement plaster skirting (upto 30 cm height) with cement mortar 1:3 (1 cement : 3 coarse sand) finished with a floating coat of neat cement.

11.6.1 18 mm thick.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for 10 sqm. Materials:- Cement mortar 1:3 = 0.205 cum+ Add for rounding corners = 0.030 cum = 0.235 Cement mortar 1:3 (1 Cement: 3 Coarse sand) (Rate as per item No. 3.8)	cum	0.235	3169.00	744.86
0367	cement for floating cost	tonne	0.02	4500.00	90.00
2209	Carriage of cement	tonne	0.02	47.29	0.95
	Labour:-				
0124	Mason 2nd class	Day	1.88	141.60	266.21
0115	Coolie	Day	1.88	135.25	254.27
0101	Bhisti	Day	0.54	138.45	74.76
9999	Sundries	L.S.	19.76	1.00	19.76
	TOTAL				1450.81
	Add 1 % for water charges				14.51
	TOTAL				1465.32
	Add 15% for contractor's profit and overheads				219.80
	Cost of 10 sqm.				1685.12
	Cost of 1 sqm.				168.51
	Say				168.50

11.7 Cement concrete pavement with 1:2:4 (1 cement : 2 coarse sand : 4 grated stone aggregate 20 mm nominal size) including finishing complete.

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for one cum. Materials:- (A) Cement concrete 1:2:4 (Rate as per item No. 4.2.3)	cum	1.00	3 579.10	3579.10
0124	Extra labour for laying in floors etc. Mason 2nd class	Day	0.35	141.60	49.56

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- 9.5 Providing and fixing panelled or panelled and glazed shutters for doors, windows and clerestory windows including ISI marked black enamelled M.S butt hinges with necessary screws excluding, panelling which will be paid for separately.
- 9.5.1 Second class teak wood
- 9.5.1.2 30 mm thick shutters

Code	Description	Unit	Quantity	Rate	Amount
1,190	Details of cost for shutters of a Door (1/3rd glazed and 2/3rd panelled) 200x108cm = 2.16 sqm				
2,204	Materials:				
0595	Teak wood				
0597	Styles : 4x200x10.0x3.0cm = 0.024 cum+ Top rails : 1x110.5x9.5x3.0cm = 0.003cum+ Bottom rails: 1x110.5x19.7x3.0cm = 0.007cum+ Lockrails: 1x110.5x15.0x3.0cm = 0.005cum+ Beading : 2x186.1x1.9x1.2cm = 0.001 cum. Total = 0.040 cum. + Add for wastage @ 10% = 0.004 cum. Grand Total = 0.044 cum.	10 cudm	44.00	410.00	1804.00
0637	Carriage of timber	cum	0.044	60.81	2.68
0640	Bright finished or black enamelled mild steel butt hinges 100x58x1.90 mm	10 Nos	6.00	54.00	32.40
0156	Bright finished or black enamelled mild steel butthinges 50x37x1.50 mm	10 Nos	2.00	28.00	5.60
0114	M.S. Screws 40mm	100 Nos	48.00	30.00	14.40
9,999	M.S. Screws 20mm	100 Nos	8.00	15.00	1.20
	Labour:				
	Carpenter (avg)	Day	1.83	146.55	268.19
	Beldar	Day	0.76	135.25	102.79
	Sundries	L.S.	35.88	1.00	35.88
	TOTAL				2267.14
	Add 1% for water charges				22.67
	TOTAL				2289.81
	Add 15% for contractor's profit and overheads				343.47
	Cost of 2.16 sqm.				2633.28
	Cost of 1 sqm.				1219.11
	Say				1219.10

- 9.5 Providing and fixing panelled or panelled and glazed shutters for doors, windows and clerestory windows including ISI marked black enamelled M.S butt hinges with necessary screws excluding panelling which will be paid for separately.
- 9.5.2 Kiln seasoned and chemically treated Hollock wood.
- 9.5.2.1 35 mm thick shutters

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for shutters of a Door (1/3rd glazed and 2/3rd panelled) 200x108cm = 2.16 sqm				
	Materials:				
	Hollock wood				

Code	Description	Unit	Quantity	Rate	Amount
2,505	Styles 4x200x10.0x3.5cm = 0.028cum+ Ralls				
2,204	Top rails 1x110.5x10.0x3.5cm = 0.004cum+ Bottom rails 1x110.5x20.0x3.5cm = 0.008cum+ Lock rails 1x110.5x15.0x3.5cm = 0.006cum+ Beading 2x186.1x1.9x1.2cm = 0.001cum. Total = 0.047 cum+ Add for wastage @ 10% = 0.005cum Grand Total = 0.051 cum.	10 cudm	51.00	230.00	1173.00
9,999	Hollock wood	cum	0.051	60.81	3.10
0595	Carriage of timber	cum	0.051	539.00	27.49
0597	Kiln seasoning	L.S.	9.10	1.00	9.10
0637	Chemical treatment	10 Nos.	6.00	54.00	32.40
0640	Black enamelled M.S. Butt hinges-100x58x1.9mm	10 Nos.	2.00	28.00	5.60
0156	Black enamelled M.S. Butt hinges-50x37x1.5mm	100 Nos	48.00	30.00	14.40
0114	M.S. Screws 40mm	100 Nos	8.00	15.00	1.20
9,999	M.S. Screws 20mm	100 Nos	8.00	15.00	1.20
	Labour:				
	Carpenter (Avg.)	Day	1.83	146.55	268.19
	Beldar	Day	0.76	135.25	102.79
	Sundries	L.S.	35.88	1.00	35.88
	TOTAL				1673.15
	Add 1% for water charges				16.73
	TOTAL				1689.88
	Add 15% for contractor's profit and overheads				253.48
	Cost of 2.16 sqm.				1943.36
	Cost of 1 sqm.				899.70
	Say				899.70

- 9.5 Providing and fixing panelled or panelled and glazed shutters for doors, windows and clerestory windows including ISI marked black enamelled M.S butt hinges with necessary screws excluding panelling which will be paid for separately.
- 9.5.2 Kiln seasoned and chemically treated Hollock wood.
- 9.5.2.2 30 mm thick shutters

Code	Description	Unit	Quantity	Rate	Amount
	Details of cost for shutters of a door (1/3rd glazed and 2/3rd panelled) 200x108cm = 2.16sqm.				
	Materials:				
	Hollock wood				
	Styles 4x200x10.0x3.0cm = 0.024cum+ Ralls				
	Top rails 1x110.5x9.5x3.0cm = 0.003cum+ Lock rails 1x110.5x15.0x3.0cm = 0.005cum+ Bottom rails 1x110.5x19.7x3.0cm = 0.007cum+ Beading 2x186.1x1.9x1.2cm = 0.001cum Total = 0.040 cum.+				

Door

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6. STAGE WOODEN FLOORING WITH BASE FRAME WORK

sl.no	description	rate	index	add	Rate	remarks	qty	Total
detail of costfor 2.5x4=10 sqm								
<u>First class teak wood top planks</u> No of joints = $4000/138 = 28.97$ -1 = 28 Nos Qty of wood required $2.5(4+0.336) \times 0.025 = 0.271$								
Add wastage 10% = 0.027 cum Total = 0.298 cum = 298.10 cudm								
1	First class teak wood	1765.75	10cudm		Market rate		298.10	52637.01
2	Extra for selected	500	10cudm		Market rate		298.10	14905.00
3	carriage of timber	60.81	18.80%	11.43	72.24	item 9.5.2	0.352	25.43
4	kiln seasoning	539	18.80%	101.33	640.33		0.352	225.40
5	Chemical treatment	9.1	18.80%	1.71	10.81		1	10.81
Brass screws 50mm slotted counters sunk								
6	head type	107	18.80%	20.12	127.12	449	1	127.12
7	Labour	58.1	18.80%	10.92	69.02	item 11.33	1	69.02
8	Sundries							89.72
		10			Total			15452.50
	Rate per sq.m							1545.25

Base frame work

First class teak
 frame work -area
 $0.5 \times 0.5 = 0.25$
 sqm = $10/0.25 = 40$

$2 \times 5 \times 4 \text{ m} \times 7 \times 4$
 $\text{cm} = 0.112 \text{ cum}$

$2 \times 9 \times 2.5 \text{ m}$
 $\times 70 \times 40 \text{ cm}$
 $= 0.126 \text{ cum}$

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9	First class teak wood	1765.75	10	cudm	Market rate		126.00	22248.45
10	Extra for selected wood	500	10	cudm	Market rate		126.00	6300.00
11	carriage of timber	60.81	18.80%		11.43	72.24 item 9.5.2	0.352	25.43
12	kiln seasoning	539	18.80%		101.33	640.33	0.352	225.40
13	Chemical treatment	9.1	18.80%		1.71	10.81	1	10.81
	Brass screws 50mm slotted counters sunk							
14	head type	107	18.80%		20.12	127.12 449	1	127.12
15	Labour	116.2				116.20 market rate	1	116.20
16	Sundries							89.72
		10			Total			29143.12
	Rate per sq.m							2914.31

Rate for frame work 2914.31 ✓
Rate for top plank work 1545.25 ✓
4459.56 / m² ✓
4460 -

PAINTING WITH OIL TYPE WOOD PRESERVATIVE

sl.no	description	rate	index	add	Rate	remarks	qty	Total
1	Painting with oil type preservative coat	12.8	18.80%	2.41	15.21	item 13.57	1.00	15.21

FRENCH SPIRIT POLISHING FOR WOOD WORK

sl.no	description	rate	index	add	Rate	remarks	qty	Total
1	French spirit polishing	75.6	18.80%	14.21	89.81	item 13.68	1.00	89.81

ROUGHENING SMOOTHENING BEFORE AND AFTER POLISHING POLISHING MACHINING WITH COCONUT SPUR AND WAX

sl.no	Rate per sqm	125	125	Market rate	1	125.00
	Grand total		per sqm			4689.58 ✓
			Say			4690 ✓

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PREFACE

- 1.0 C.P.W.D. Analysis of Rates for Delhi, 2007 is the revised edition of C.P.W.D. Analysis of Rates for Delhi, 1997.
- 2.0 DAR, 2007 incorporates most of the analysis of DAR, 1997 with all correction slips up-to date and will replace DAR, 1997.
- 3.0 DAR, 2007 is a bilingual document (Hindi version will follow).
- 4.0 DAR, 2007 is published in two volumes as under:

Volume Number	Sub-head No.	Contents/ Chapters
One	00	Basic Rates
	01	Carriage of materials
	02	Earth Work
	03	Mortars
	04	Concrete Work
	05	Reinforced Cement Concrete Work
	06	Brick Work
	07	Stone Work
	08	Marble Work
	09	Wood and PVC Work
	10	Steel Work
	11	Flooring
12	Roofing	
Two	13	Finishing
	14	Repairs to Buildings
	15	Dismantling and Demolishing
	16	Road Work
	17	Sanitary Installation
	18	Water Supply
	19	Drainage
	20	Pile Work
	21	Aluminium Work
	22	Water Proofing
	23	Horticulture and Landscape

- 5.0 Analysis of many items in DAR, 2007, which are either obsolete or are not in use, have been deleted. Similarly, analysis of many items have been modified to correspond to items of DSR, 2007. Several new analysis of items pertaining to new materials and new technologies in the construction sector have also been included. Analysis of rates of many items also incorporate element of machinery instead of lump sum provisions.
- 6.0 Analysis have been modified to include execution of different works by using various electrical and mechanical equipments i.e. excavators, tower cranes, mobile cranes, mechanical platforms; Batch Mix plant, transit mixers and pumps, piling rigs, pneumatic cutters, chisels, chippers, hammers etc. Built-in provision has been taken in the analysis of rates for new construction technology/ mechanisation.

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ACCESS FOR ALL SIDES

sl.no	description	rate	index	add	Rate	remarks	qty	Total
1	Brick work	2293.4	18.80%	431.16	2724.56	item 6.1	25.00	68113.98
2	plastering	95.1	18.80%	17.88	112.98	item 13.31	150.00	16946.82
3	weldmesh <i>yet to be placed</i>	500	18.80%	94.00	594.00	Marketrate	100.00	59400.00
4	scaffolding work statue inside fixing work -10 m ²	82.7	18.80%	15.55	98.25	item 14.72	300.00	29474.28
5	m level <i>Salam</i>				3000	50.00 Marketrate	50	150000.00
6	Eaves board clamping around statue fixing arrangement at				LS	market rate	50	180000.00 50000 ✓
7	ground level <i>Inching composition</i>				10,000	market rate	14	140000.00 12000 ✓ 46064.92 ✓ 140000 ✓
Total								500000.00 ✓

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RED OXIDE FLOORING

sl.no	description	rate	index	add	Rate	remarks	qty	Total
1	BASE WORK	337.8	18.80%	63.51	401.31	item 11.9.2	1330.00	533737.51 ✓
2	<i>ce null</i> plastering	168.50 95.1	18.80%	17.88	112.98	item 13.31	150.00	16946.82 ✓
3	weldmesh	500	18.80%	94.00	594.00		100.00	59400.00
4	scaffolding	82.7	18.80%	15.55	98.25	item 14.72	300.00	29474.28
5	statue inside fixing				50.00			100000.00
6	Eaves clamping alround				LS			180000.00
7	staute fixing arrangement and details				LS			45000.00
Total								964558.61 ✓

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4. TEAK WOOD - PANNELLED DOOR

sl.no	description	rate	index	add	Rate	remarks	qty	Total
	details of cost for shutters of a Door fully pannelled 2 x 2.2 =2.4 sqm Materials styles 6x220x15x4cm=0.0792 cum Top rails 4x200x15x4cm=0.048 cum Bottom rails 4x200x15x4cm=0.048 cum lock railss 4x200x15x4cm=0.048 cum Middle rails 4x200x15x4cm=0.048 cum panels 4x4x40x30x25cm=0.048 cum Total = 0.32 cum Add for wastage @10%=0.032							
1	Grand total =0.352 cum	1590	10	cudm	Market rate		35.20	55968.00
2	carriage of timber	60.81	18.80%	11.43	72.24	item 9.5.2	0.352	25.43
3	kiln seasoning	539	18.80%	101.33	640.33		0.352	225.40
4	Chemical treatment	9.1	18.80%	1.71	10.81		1	10.81
5	Brass butt hinges 125x70x4 mm	450	18.80%	84.60	534.60	code0378	1	534.60
6	Brass towerbolt 250mm	51	18.80%	9.59	60.59	400	4	242.35
7	Brass handle 125mm	85	18.80%	15.98	100.98	408	1	100.98
8	Brass latch	257	18.80%	48.32	305.32	413	1	305.32
9	Brass screws 40mm	96	18.80%	18.05	114.05	450	1	114.05
10	Brass screws 20mm	53	18.80%	9.96	62.96	453	1	62.96
11	Labour	473	18.80%	88.92	561.92	item 9.5.2	1	561.92
12	Sundries							348.18
		2.4			Total			58500.00
	Rate per sq.m							24375.00

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EMERGENCY /MINIMUM WORKS FOR PROTECTION FOR KOOTHAMBALAM STRUCTURE & FUNTIONALISINGWORK

Detailed estimate

Sl.No	Quantity	Description of works	Rate	unit	Amount	Remarks
		Sub- Head No. 12 - Roofing				
i ✓	500.00 ✓	1.Providing and fixing on roof pressed clay tiles (mangalore tile of 20 mm nominal thickness)	950 ✓	sqm	475000	Item 12.48. -12.49
		Sub- Head No. 6 Brick work &13 finsihing				
	as estimated ✓	2.Access for all sides & such masonry works	LS	as estimated	500000 ✓	
		Sub- Head No. 13 finsihing				
✓	5400.00 ✓	3. Basic wood protection etc	101.95 471.12 80	sqm	520000 600048	
		Sub- Head No.9 - wood and pvc work				
	55.00	4. Providing Door for all entries	21375 21667	sqm	1191685	Presently these are no doors to close the building
		Sub- Head No.9 - wood and pvc work				
✓	35.00	5. Basement works	5240 5240	sqm	183400	
✓	165.00	6.Stage wooden flooring	4690 4690	sqm	773869	
		Sub- Head No.11- Flooring				
	1330.00	7.Red oxide flooring	723	sqm	961588	Presently there are concrete sufrage needs to be finished
		Sub Head 14 - Repairs to the building				
	2632.69	8. (Reworking) Refixing roof tiles which are loose	150	sqm	394903	that has become loose causing leakage at any points
	as estimated	9.Green room (min) civil work	LS	LS	500000	
		Sub total			5580494	
		Electrical installation (Balance work	50	20	3000000	40% of the work done already
ii		HVAC work (completing balance of works)	118	70	4800000	expensive equipemnts are laying on site which will get damaged it .
iii		Sound Equipment		10	1000000	available withus (Equipments etc.)
iv		Stage lighting (commissioning only)	70	60	1000000	..do..
v		stone Sculpture installation		10	1000000	stone sculpture are ready for fixing on a appriate place
vi		Grand total			16380494	

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S TEAK WOOD WOODEN FLOORING FOR BASEMENT ROOF

sl.no	description	rate	index	add	Rate	remarks	qty	Total
	detail of cost for 2.5x4=10 sqm							
	First class teak wood planks No of joints = $4000/138 = 28.97 - 1 = 28$ Nos							
	Qty of wood required $2.5(4+0.336) \times 0.025 = 0.271$							
	Add wastage 10% = 0.027 cum							
	Total = 0.298 cum = 298.10 cudm							
1	First class teak wood burma	1412.1	10		Market rate		298.10	42094.70
2	Extra for selected planks	250	10		Market rate		298.10	7452.50
3	carriage of timber	60.81	18.80%	11.43	72.24	item 9.5.2	0.352	25.43
4	kiln seasoning	539	18.80%	101.33	640.33		0.352	225.40
5	Chemical treatment	9.1	18.80%	1.71	10.81		1	10.81
6	Brass screws 50mm slotted counters sunk head type	107	18.80%	20.12	127.12	449	1	127.12
7	Labour	58.1	18.80%	10.92	69.02	item 11.33	1	69.02
8	Sundries							89.72
		10			Total			8000.00
	Rate per sq.m							800.00 ✓

1765.75

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3. Basic wood protection etc -

PAINTING FOR WALLS - EMULSION

sl.no	description	rate	index	add	Rate	remarks	qty	Total
1	Wall painting with plastic emulsion of appd brand two or more coats	40.05	18.80%	7.53	47.58	item 13.60	4000.00	190317.60
2	scaffolding above 10 m lvl	82.7	18.80%	15.55	98.25	item 14.72	1335.00	131160.55
Total								321478.15
Rate per sqm								80.37

PAINTING FOR STEEL SURFACE - SYNTHETIC ENAMEL

sl.no	description	rate	index	add	Rate	remarks	qty	Total
1	Painting with synthetic enamel paint of appd brand to give an even shade	35.35	18.80%	6.65	42.00	item 13.61	700.00	29397.06
2	scaffolding above 10 m lvl	82.7	18.80%	15.55	98.25	item 14.72	700.00	68773.32
Total								98170.38
Rate per sqm								140.24

PAINTING WITH OIL TYPE WOOD PRESERVATIVE

sl.no	description	rate	index	add	Rate	remarks	qty	Total
1	Painting with oild type preservative coat	12.8	18.80%	2.41	15.21	item 13.57	700.00	10644.48
2	scaffolding above 10 m lvl	82.7	18.80%	15.55	98.25	item 14.72	700.00	68773.32
Total								79417.80
Rate per sqm								113.45

FRENCH SPIRIT POLISHING FOR WOOD WORK

sl.no	description	rate	index	add	Rate	remarks	qty	Total
1	French spirit polsihing	75.6	18.80%	14.21	89.81	item 13.68	150.00	13471.92
2	scaffolding	82.7	18.80%	15.55	98.25	item 14.72	50.00	4912.38
Total								18384.30
Rate per sqm								122.56

Total 321478.15 98170.38 79417.80 18384.30 517450.63 ✓
 Add additional work tax 32549.37 ✓
 Say 600000

66

5,50,000 ✓

5(1)

ச.ப.ப.ப. (க.சீ) ஓச (ச.சீ)
கே.பி.பி., சென் - 50 / CPWD, Chennai - 50
நிர்மாண அலுவலகம் / Works Section
14 JUN 2012
அ.ச. / DY. No. 616

GOVERNMENT OF INDIA
Office of the Chief Engineer (SZ)-I
CENTRAL PUBLIC WORKS DEPARTMENT
2nd Floor, G Wing, Rajaji Bhavan
Besant Nagar, Chennai- 600090

No: CE/SZ-I/Cost Index / 2012 / 5028-57

Dated: 06.06.2012

Sub: Revision of Cost Index as on 01.04.2012 for Chennai / Avadi, Sriperumbudur, Melakkottaiyur and Arakkonam under South Zone - I.

The Chief Engineer (SZ)I, CPWD, Chennai has approved the cost index as on 01.04.2012 for the following places as detailed below over the base of 100 as on 01.10.2007.

Sl no	Name of places	State	Cost Index as on 01.04.2012	Remarks
1	Chennai / Avadi	Tamil Nadu	177	
2	Melakkottaiyur	Tamil Nadu	176	
3	Sriperumbudur	Tamil Nadu	175	
4	Arakkonam	Tamil Nadu	174	

M. Jagannathan
(M.JAGANNATHAN)
Superintending Engineer (P),
SZ(I),CPWD,Chennai

Copy to :

1. The Additional Director General (SR), CPWD, Rajaji Bhavan, Chennai.
2. The Director of works, O/o ADG(SR), CPWD, Chennai .It is requested that cost index may please be uploaded in the website of CPWD, southern region.
3. The Chief Engineer (CSQ), CPWD, Nirman Bhavan, A wing, New Delhi - 11
4. The Chief Engineer (E), CPWD, Chennai.
5. The Chief Engineer (Val), Income Tax Department, Chennai.
6. All the Superintending Engineers under South Zone I. (CCC-I, CCC-II - Chennai, TPC-Trichy and MDUCC - Madurai,PCD)
7. The Superintending Engineer (E), CCEC, CPWD, Chennai.
8. The Superintending Engineer (Val), Income Tax Department, Chennai.
9. The Executive Engineers, CCD I, II, III, IV, V, IITMPD, IITDMPD, CPWD, Chennai.
10. The Executive Engineers (E), CCED I, II, III, IV, CPWD, Chennai.
11. The Executive Engineer (Val), Income Tax Department, Chennai.

M. Jagannathan
Superintending Engineer (P),

AE (PM)
EE (PM)
11/6/2012
11/6/2012
AE (Val)
upload in SR web
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TIMBER MERCHANTS, SAW MILL OWNERS & CONTRACTORS

STOCKISTS : ALL KINDS OF TIMBER, TILES, PLYWOODS, HARD BOARDS & LIGHT ROOFINGS
 73-77 (New 153) Dr. Natesan Road, Chennai - 600 005.

No. 353

To Chennai Engineering Constructors Date 3/9/2010
Porn Chennai

Delivered at your Works at Kalashitesa Foundation Thirupinj through
 Vehicle No. _____ against your Order No. _____

Delivery memo No. & dt _____ RR / LR No. _____ dt. _____

DESCRIPTION	SIZE	Pieces	R. Ft. R. Mts.	C. Ft. or Cu. Mts	Rate	AMOUNT	
						Rs.	P.
<u>Mangalore Tiles</u>	<u>Double groy</u>						
<u>Hindustan</u>		<u>5000 NOS</u>			<u>@ 28/50</u>	<u>142500</u>	<u>00</u>
<u>Ridges</u>		<u>500 NOS</u>			<u>@ 40/=</u>	<u>20,000</u>	<u>00</u>
						<u>162500</u>	<u>00</u>
					<u>VAT 4%</u>	<u>6500</u>	<u>00</u>
					<u>Unloading & Cash</u>	<u>169000</u>	<u>00</u>
						<u>3500</u>	<u>00</u>
						<u>172500</u>	<u>00</u>
<u>Delivery Schedule</u>	<u>2 to 3 days</u>	<u>date</u>	<u>of order</u>	<u>&</u>	<u>payment</u>		
<u>Payment Term</u>	<u>100%</u>	<u>advance</u>					

E. & O. E.

(Regd. Office : 30, Srinivasa Rao Road, Chennai - 600 004.)

25 per cent interest per annum will be charged, if the payment is not made within 30 days.
 All payments should be by crossed/Account payee cheques, cash payment can be done on official stamped receipt only.

Koornambakkam Thirupinj
Proposed Additions
Alterations and
civil works.
Rng tiles & Ridges.
for work
P. Ra. Jayaram
C.O.W.I

P. Ra. Jayaram
C.O.W.I

Prepared by [Signature]

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Estimated cost

The estimated cost of undertaking the emergency work on the Koothambalam will be nearly Rs.9.75 lakh.

Modality adopted for execution of emergency work:

Out of the three items mentioned at pre-page, item no 1 is a part of the work under original contract executed with the existing civil contractor i.e. M/s Chennai Engineers. He will be asked to execute the said item at the rate as mentioned in the original agreement. In the event of the civil contractor not carrying out the work, the same is to be carried out internally by supplying the necessary materials and labour. A period of one week (7 working days) will be given to M/s.Chennai Engineers to respond to our letter asking him to carry out this work.

The other three items (sl.No.2, 3, &4) are not a part of the original agreement executed with M/s Chennai Engineers and the work will be carried out internally by supplying the necessary material and labour.

The above proposal to carry out emergency work on the Koothambalam may kindly be approved by the Chairman, Kalakshetra Foundation.


The Chairman

The Works Committee


The Chairman

Kalakshetra Foundation

12/4/2014

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Item No	Description of item in brief	Qty	Rate	Unit	Amount	Remarks
1	i. Roofing work with Mangalore tiles includes all costs involved such as labour, material, double scaffolding, eaves board costing, fixing, replacing missing teak wood members if any etc. ii. Roofing work with Mangalore Ridge tiles includes all cost involved such as labour, materials in all respects	500	950	One sqm	475000	Item No. 131 & 133 under the original agreement with M/s.Chennai Engineers
2	Providing and fixing Flush door shutters non-decorative type with necessary heavy duty hinges, locking arrangements and both sides enamel painting for closing all entry doors	43	4060	One sqm	174580	New item
3	Wood Guard preservative coating and Enamel painting to roofing support members	1000	100	One sqm	100000	New item
4	Post construction Anti- termite treatment	1550	115	One sqm	178250	New item
	Total				927830	
	Add 5 % contingencies				46392	
					974222	
	Grand total		Say		9.75 lakh	

The above list is a bare minimum which needs to be carried out on an emergency & exceptional measure as these works cannot be postponed or delayed in anyway.

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2532
9/4/13

8/4/13



Subject:-To accord approval to undertake emergency work for protection of Koothambalam structure

The Governing Board in its meeting held in April 2012 directed that further work on the Koothambalam be stopped till a comprehensive Project Report & Detailed Estimate on Koothambalam is prepared by the Works Committee for the financial concurrence is accorded by the Finance Committee.

The technical report on Koothambalam could not be framed as the members of the *erstwhile Works Committee resigned and the Committee became null and void.*

The new Works Committee was constituted in December 2012 with the due approval of the Governing Board.

The Committee is under the process of preparing the Comprehensive Project Report and estimate, and thereafter the same will be placed before the Finance Committee for financial concurrence. In the meantime, as the work on Koothambalam has not been undertaken for nearly one year, there is an immediate *requirement to undertake emergency work to protect the structure of the Koothambalam.* If these works are not carried out immediately on an emergency basis, it will very critically & adversely affect the existing structure. It will also lead to *progressive damage to the existing newly installed machinery & fixtures inside the Koothambalam.* This has to be stemmed & rectified immediately failing which the physical condition of the Koothambalam and its installed tool, plant & machineries would be seriously damaged. The list of emergency work to be undertaken for the Koothambalam is as under:-

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