

MAHARASHTRA STATE WAREHOUSING CORPORATION

583/B, MARKET YARD, GULTEKADI, PUNE-411037

**STANDARD ESTIMATE FOR CONSTRUCTION OF 1/3000 MT CAP. PRE ENGINEERED WH BLDG
WITH ANCILLARY WORKS**

CAPACITY								3000 MT		
SIZE	OUTER		1 X	52.696	X	29.158	1536.51			
	INNER		1 X	52.00	X	28.458	1479.70			
LONG WALLS		2								
SHORT WALLS		2								
FOUNDATION DEPTHS								Av Depth		
EARTH SOIL 0 TO 1.50								1.50		
EARTH SOIL 1.50 to 3.00								0.30		
EARTH SOIL 3.00 to 5.00								0.00		
H.M. 1.5 TO 3.00								0.30		
H.M.& BOULDER up to 1.50m								0.00		
H.M.& BOULDER 1.50mtr to 3.00mtr								0.20		
SOFT ROCK								0.20		
HARD ROCK								0.00		
		TOTAL						2.50		
CUTTING IN PLINTH (Provision)								0.45		
asper Site condition										
Ex. Column Footings										
Column C1	2	X	6	X	5.60	X	4.90			
Column No. C3	2	X	2	X	3.80	X	3.10			
Column No.C2	2	X	3	X	3.50	X	2.90	Big L/W	7.417	
								Big L/W end	7.417	
								Small S/W	7.094	
Column Platform	8	X	2	X	1.30	X	1.30	S/W	7.093	
Ex. Ground Beam PANEL										
C1-C1 middle	2	X	5	X	2.517	X	0.65	2.517		
C3-C1 end	2	X	2	X	3.417	X	0.65	3.417		
C2-C3 END WALL	2	X	2	X	3.744	X	0.65			
C2-C2 M	2	X	2	X	4.193	X	0.65	4.193	6.99 C/C	
APRON long	1	X	2	X	55.80	X	1.28	7.117 C/C		
APRON short	1	X	2	X	29.70	X	1.28			
Column Nos. & Size										
Column C1	2	X	6	X	1.000	X	0.600	X	0.00	
Column No.C2	2	X	3	X	0.633	X	0.400	X	0.00	
Column No. C3	2	X	2	X	0.637	X	0.608	x	0.00	
Column No.Platform	8	X	2	X	0.45	X	0.23			
PCC, Tarfelt, BBM, BEAMS										
PANELS										
C1-C1 middle	2	X	2	X	6.83	X	0.35	6.83	7.434 C/C	
C3-C1 end	2	X	2	X	6.83	X	0.35	6.830	7.434	
C2-C3 END WALL	2	X	2	X	6.59	X	0.35	6.590	7.094	
C2-C2 M	1	X	2	X	6.693	X	0.35	6.693	7.093	
Rolling shutters	2	X	8	X	2.10			X	2.55	
V1	2	X	12	X	0.60			X	0.60	
V2	2	X	14	X	1.00			X	0.60	
V3	0	X	8	X	1.30			X	0.45	
V2 in gable	2	X	8	X	1.00			X	0.60	
TK. OF C.C. FLOORING						0.15				
Gutter UCR long	2	X	2	X	55.60	X	0.45	X	0.35	
short	2	X	2	X	31.16	X	0.45	X	0.35	
APRON BBM long	2	X	2	X	53.90	X	0.23	X	0.50	
short	2	X	2	X	29.198	X	0.23	X	0.50	
Dock leveller	2	X	2	X						
Filling Below Aprron L/W	1	X	2	X	55.60	X	1.50	X	0.45	
S/W	1	X	2	X	31.16	X	1.50	X	0.45	
BC Soil	2	X	8	X	0.65	X	0.350			
	2	X	2	X	0.45	X	0.350			

2	X	2	X	0.650	X	0.523
4	X	2	X	0.45	X	0.23

Provision BC soil (

MAHARASHTRA STATE WAREHOUSING CORPORATION

583/B, MARKET YARD, GULTEKADI, PUNE-411037

STRATA FINAL

STANDARD ESTIMATE FOR CONSTRUCTION OF 1/3000 MT CAP. PRE ENGINEERED WH BLDG WITH ANCILLARY WORKS

IN HARD STRATA

Part - A :- Civil work

S.W. I - W.H.Building 1/3000 M T

MEASUREMENT SHEET

Item	Nos	& Description of	NO.S		LENGTH	BREDTH	DEPTH /	TOTAL	Unit
			1	X	2		HIGHT	QUANTITY	
1		Clearing grass and removal of rubbish up to a distance of 50 metres outside the periphery of the area .							Sqm
			1	X	1	X	77.00	X	54.00
								=	4158.00
								TOTAL	= 4158.00
								SAY	= 4158.00
2		Cutting down trees including trunks and branches with girths above 30cm to 60cm and stacking the materials neatly with all lifts and lead of 1000m as directed and earth filling in the depression / pit if any.							No
			1	X	1	X			
								=	1.00
								TOTAL	= 1.00
								SAY	= 1.00
3		Excavation for foundation in earth, soil of all types, sand, gravel and soft murum, including removing the excavated material up to adistance of 50 m. beyond the building area and stacking and spreading as directed, dewatering, preparing the bed for the foundation and necessary back filling, ramming, watering including shoring and strutting etc. complete. (Lift upto 1.5 m.) By Mechanical							cum

Column footing

Column C1	2	X	6	X	5.60	X	4.90	X	1.50	=	493.92
Column No. C3	2	X	2	X	3.80	X	3.10	X	1.50	=	70.68
Column No.C2 END	2	X	3	X	3.50	X	2.90	X	1.50	=	91.35
Column No.Platform	8	X	2	X	1.30	X	1.30	X	1.50	=	40.56

For Ground Beam PANEL

C1-C1 middle	2	X	2	X	2.517	X	0.65	X	0.65	=	4.25
C3-C1 end	2	X	2	X	3.417	X	0.65	X	0.65	=	5.77
C2-C3 END WALL	2	X	2	X	3.7	X	0.65	X	0.65	=	6.33
C2-C2 M	1	X	2	X	4.193	X	0.65	X	0.65	=	3.54
APRON long	1	X	2	X	55.80	X	1.28	X	0.65	=	92.84
APRON short	1	X	2	X	29.698	X	1.28	X	0.65	=	49.42
									Total		858.67
									say		859.00

- 4 Excavation for foundation in earth, soils of all types, sand, gravel and soft murum, including removing the excavated material upto a distance of 50 metres beyond the building area and stacking and spreading as directed, dewatering, preparing the bed for the foundation and necessary back filling, ramming, watering including shoring and strutting etc. complete. (Lift from 1.5m to 3.0m) cum

Column footing

Provision say = 1.00

- 5 Excavation for foundation in hard murum including removing the excavated material upto distance of 50 metres beyond the building area and stacking and spreading as directed, dewatering, preparing the bed for the foundation and necessary back filling, ramming, watering including shoring and strutting etc. complete. (Lift upto 1.50 m) By Mechanical Means cum

Column footing

Column C1	2	X	6	X	5.6	X	4.9	X	0.30	=	98.78
Column No. C3	2	X	2	X	3.8	X	3.1	X	0.30	=	14.14
Column No. C2 END	2	X	3	X	3.5	X	2.9	X	0.30	=	18.27
Column No. Platform	8	X	2	X	1.30	X	1.30	X	0.30	=	8.11

For Ground Beam PANEL

C1-C1 middle	2	X	2	X	2.517	X	0.65	X	0.00	=	0.00
C1-C1 middle end	2	X	2	X	3.417	X	0.65	X	0.00	=	0.00
C3-C2	2	X	2	X	3.744	X	0.65	X	0.00	=	0.00
C2-C2 E	1	X	2	X	4.193	X	0.65	X	0.00	=	0.00
APRON long	0	X	2	X	55.80	X	1.28	X	0.00	=	0.00
APRON short	0	X	2	X	29.70	X	1.28	X	0.00	=	0.00
Total										=	139.30
say										=	140.00

- 6 Excavation for foundation in hard murum including removing the excavated material upto distance of 50 metres beyond the building area and stacking and spreading as directed, dewatering, preparing the bed for the foundation and necessary back filling, ramming, watering including shoring and strutting etc. complete. (Lift 1.50 to 3.00 m) By Mechanical Means cum

Column footing

Provision Total = 0.00
say = 1.00

- 7 Excavation for foundation in hard murum and boulders including removing the excavated material up to a distance 50 metres, beyond the building area and stacking and spreading as directed, dewatering, preparing the bed for the foundation and necessary back filling, ramming, watering including shoring and strutting etc. complete. (Lift upto 1.5m.) By Mechanical Means cum

Column footing

Column C1	2	X	6	X	5.6	X	4.9	X	0.00	=	0.00
Column No. C3	2	X	2	X	3.8	X	3.1	X	0.00	=	0.00
Column No. C2 END	2	X	3	X	3.5	X	2.9	X	0.00	=	0.00
Column No. C2 MIDDLE	0	0	0	0	0	0	0	X	0.00	=	0.00
Column No. C3 EXP	0	0	0	0	0	0	0	X	0.00	=	0.00
Column No. Platform	8	X	2	X	1.3	X	1.3	X	0.00	=	0.00
Provision									Total		1.00
									say		1.00

- 8 Excavation for foundation in hard murum and boulders including removing the excavated material up to a distance 50 metres, beyond the building area and stacking and spreading as directed, dewatering, preparing the bed for the foundation and necessary back filling, ramming, watering including shoring and strutting etc. complete. (Lift 1.50 to 3.00 m) By Mechanical Means cum

Column footing

Column C1	2	X	3	X	0.633	X	0.4	X	0.00	=	0.00
Column No. C3	2	X	2	X	0.637	X	0.608	X	0.00	=	0.00
Column No. C2 END	8	X	2	X	0.45	X	0.23	X	0.00	=	0.00
Column No. C2 MIDDLE	0	0	0	0	0	0	0	X	0.00	=	0.00
Column No. C3 EXP	0	0	0	0	0	0	0	X	0.00	=	0.00
Column No. Platform	0	X	2	X	6.834	X	0.35	X	0.00	=	0.00
Provision									Total		1.00
									say		1.00

- 9 Excavation for foundation in Soft rock and old cement or lime masonry foundations including removing the excavated material upto a distance of 50 metres beyond the building area and stacking as directed, including dewatering, preparing the bed for the foundation and necessary back filling with available earth/murum, ramming ,watering including shoring and strutting etc. complete. (Lift up to 1.5m) By Mechanical Means cum

Provision												1.00	
										Total		1.00	
										Say		1.00	
10	Excavation for foundation in Soft rock and old cement or lime masonry foundations including removing the excavated material upto a distance of 50 metres beyond the building area and stacking as directed, including dewatering, preparing the bed for the foundation and necessary back filling with available earth/murum, ramming ,watering including shoring and strutting etc. complete. (Lift from 1.5m to 3.00 m.) By Mechanical Means												cum
	Column footing												
	Column C1	2	X	6	X	5.6	X	4.9	X	0.20	=	65.86	
	Column No. C3	2	X	2	X	3.8	X	3.1	X	0.20	=	9.42	
	Column No.C2 END	2	X	3	X	3.5	X	2.9	X	0.20	=	12.18	
	Column No.Platform	8	X	2	X	1.3	X	1.3	X	0.20	=	5.41	
										Total		92.87	
										Total		92.87	
										say		93.00	
11	Excavation for foundation in Hard rock by chiselling, wedging, line drilling, etc. including trimming and levelling the bed, removing the excavated material upto a distance of 50 metres beyond the building area stacking as directed, dewatering and back filling with available earth/ murum watering, ramming etc. complete. (Lift upto 1.5 m). By Mechanical Means												cum
	Column footing												
	Column C1	2	X	6	X	5.6	X	4.9	X	0	=	0.00	
	Column No. C3	2	X	2	X	3.8	X	3.1	X	0	=	0.00	
	Column No.C2	2	X	3	X	3.5	X	2.9	X	0	=	0.00	
	Column No.Platform	8	X	2	X	1.3	X	1.3	X	0	=	0.00	
	Provision									Total		0.00	
										Say	=	5.00	
12	Excavation for foundation in Hard-rock by blasting including trimming and leveling the bed by chiselling where necessary and removing the excavated material and stacking it in measurable heaps within a distance of 50 metres from the building area including ewatering and back filling with available earth/murum watering, ramming etc. complete. (Lift from 1.5m To 3.0 m) By Mechanical Means												cum
	Column footing												
										SAY	=	5.00	
13	Excavation in plinth in earth soil of all types of sand or gravel or soft murum including dressing section to the required grade, cambers & side slope & conveying the excavated materials with lead of 50 M and spreading for embakment or st												cum
		1	X	2	X	52.00	X	28.46	X	0.10	=	295.94	
										TOTAL	=	295.94	
										SAY	=	296.00	
14	Excavation in plinth in Hard murum including dressing section to the required grade, cambers & side slope & conveying the excavated materials with lead of 50 M and spreading for embakment or stacking etc. Complete												cum
		1	X	2	X	52.00	X	28.46	X	0.00	=	0.00	
										TOTAL	=	0.00	
										SAY	=	5.00	
15	Providing and fixing 25mm diameter steel anchor dowel in hard rock including drilling hole of 32 mm diameter up to 0.75 mtrs depth,placing the dowel in position and effectively grouting the hole with CM 1:1 proportion etc. complete.												Nos
	Provision	0.5	X	18	X	4.00	X	1.00	X	1.00	=	36.00	
										TOTAL	=	36.00	

- 16 Construction of dry lean cement concrete Sub- base over a prepared sub-grade with coarse and fine Cum aggregate (VSI grade finely washed crushed sand) conforming to IS: 383, the size of coarse aggregate not exceeding 25 mm, , cement content not to be less than 150 kg/ cum, optimum moisture content to be determined during trial length construction, concrete strength not to be less than 10 Mpa at 7 days, mixed in a batching plant/ Weigh batch mixer, transported to site with all leads and lifts, laid with a paver with electronic sensor /by suitable means as approved by Engineer-in-charge , compacting with vibratory roller, finishing, curing and including preparation of subgrade surface if required etc. complete.(Natural Sand)

Bed concrete in WH.	1	X	1	X	52.00	X	28.46	X	0.10	=	147.97
										Total	= 147.97
										Say	= 148.00
										SAY	= 148.00

- 17 Construction of dry lean cement concrete Sub- base over a prepared sub-grade with coarse and fine Cum aggregate (VSI grade finely washed crushed sand) conforming to IS: 383, the size of coarse aggregate not exceeding 25 mm, , cement content not to be less than 150 kg/ cum, optimum moisture content to be determined during trial length construction, concrete strength not to be less than 10 Mpa at 7 days, mixed in a batching plant/ Weigh batch mixer, transported to site with all leads and lifts, laid with a paver with electronic sensor /by suitable means as approved by Engineer-in-charge , compacting with vibratory roller, finishing, curing and including preparation of subgrade surface if required etc. complete.(Crushed sand VSI Grade)

Provision	1	X	1	X	0.00	0.00	0.00	X	0.10	=	0.00
										Total	= 0.00
										Say	= 0.50

- 18 Providing and laying Cast in situ/Ready Mix cement concrete in M-10 of trap/ granite/ quartzite/ gneiss cum metal for foundation and bedding including bailing out water, Steel centering, formwork,laying/pumping, compacting, roughening them if special finish is to be provided, finishing if required and curing complete, with fully automatic micro processor based PLC with SCADA enabled reversible Drum Type mixer/concrete Batch mix plant (Pan mixer) etc. complete. With fine aggregate (Natural Sand)

Column footing

Column C1	2	X	6	X	5.6	X	4.9	X	0.10	=	32.93
Column No. C3	2	X	2	X	3.8	X	3.1	X	0.10	=	4.71
Column No.C2 END	2	X	3	X	3.50	X	2.90	X	0.10	=	6.09
Column No.Platform	2	X	2	X	1.30	X	1.30	X	0.10	=	0.68

For Ground Beam PANEL

C1-C1 middle	2	X	2	X	2.517	X	0.65	X	0.10	=	0.65
C3-C1 middle end	2	X	2	X	3.417	X	0.65	X	0.10	=	0.89
C3-C2	2	X	2	X	3.744	X	0.65	X	0.10	=	0.97
C2-C2 E	1	X	2	X	4.193	X	0.65	X	0.10	=	0.55
APRON long	1	X	2	X	55.80	X	1.28	X	0.10	=	14.28
APRON short	1	X	2	X	29.698	X	1.28	X	0.10	=	7.60
										Total	= 69.35
										say	= 70.00

- 19 Providing and laying Cast in situ/Ready Mix cement concrete in M-10 of trap/ granite/ quartzite/ gneiss cum metal for foundation and bedding including bailing out water, Steel centering, formwork,laying/pumping, compacting, roughening them if special finish is to be provided, finishing if required and curing complete, with fully automatic micro processor based PLC with SCADA enabled reversible Drum Type mixer/concrete Batch mix plant (Pan mixer) etc. complete. With fine aggregate (Crushed sand VSI Grade)

Provision	2	X	2	X	4.193	X	0.65	X	0.10	=	1.00
										Total	= 1.00
										say	= 0.50

- 20 Providing uncoursed rubble masonry of trap / granite / quartzite / gneiss stones in cement mortar 1:6 in cum foundation and plinth of inner walls / in plinth of external walls including bailing out water manually , striking joints on un exposed faces and watering etc.complete.(Natural Sand)

APRON long	1	X	2	X	55.60	X	0.45	X	0.35	=	17.51
APRON short	1	X	2	X	31.16	X	0.45	X	0.35	=	9.81
										Total	= 27.33
										say	= 28.00

21	Providing uncoursed rubble masonry of trap / granite / quartzite / gneiss stones in cement mortar 1:6 in foundation and plinth of inner walls / in plinth of external walls including bailing out water manually , striking joints on un exposed faces and watering etc.complete.(Crushed sand VSI Grade)	cum
Provision	0 0 2 0 0.00 0 0 X 0.35 =	0.00
	Total =	0.50
	say =	0.50

- 22 Providing second class Burnt Brick masonry with conventional/ I.S. type bricks in cement mortar 1:6 in foundations and plinth of inner walls/ in plinth external walls including bailing out water manually , striking joints on unexposed faces, raking out joints on exposed faces and watering etc. Complete.(**Natural Sand**) cum

For PANEL

C1-C1 middle	2	X	2	X	6.834	X	0.35	X	0.97	=	9.28
C3-C1 middle end	2	X	2	X	6.83	X	0.35	X	0.97	=	9.28
C3-C2	2	X	2	X	6.59	X	0.35	X	0.97	=	8.95
C2-C2 E	1	X	2	X	4.193	X	0.35	X	0.97	=	2.85
APRON long	1	X	2	X	53.896	X	0.23	X	0.65	=	16.11
APRON short	1	X	2	X	29.198	X	0.23	X	0.65	=	8.73
Deductions for											
Munim columns	2	X	7	X	0.350	X	0.230	X	1.20	=	-1.35
C1-C1 middle	0	X	6	X	1.00	X	0.23	X	0.15	=	0.00
	0	X	2	X	6.83	X	0.23	X	0.15	=	0.00
C1-C1 middle end	0	X	2	X	6.59	X	0.23	X	0.15	=	0.00
C3-C2	0	X	2	X	4.193	X	0.23	X	0.15	=	0.00
	0	X	2	X	53.896	X	0.23	X	0.15	=	0.00
										Total =	53.84
										say =	54.00

- 23 Providing second class Burnt Brick masonry with conventional/ I.S. type bricks in cement mortar 1:6 in foundations and plinth of inner walls/ in plinth external walls including bailing out water manually , striking joints on unexposed faces, raking out joints on exposed faces and watering etc. Complete.(**Crushed sand VSI Grade**) cum

For PANEL

Provision	0	x	3	x	0	x	0.35	x	0.00	=	0.00
										Total =	1.00
										say =	0.50

- 24 Providing and fixing in position TMT - FE - 500 bar reinforcement of various diameters for R.C.C. pile caps, footings, foundations, slabs, beams columns, canopies, staircase, newels, chajjas, lintels pardis, copings, fins, arches etc. as per detailed designs, drawings and schedules. including cutting, bending, hooking the bars, binding with wires or tack welding and supporting as required complete. MT

Footing	337.00			26960							27
	146.00			16060							16
										Total	43.02
										say	44.00

- 25 Providing and laying in situ /Ready Mix cement concrete M-30 of trap / granite /quartzite/ gneiss metal for R.C.C. work in foundations like raft, strip foundations, grillage and **footings of R.C.C.** columns and steel stanchions etc. including bailing out water, Steel centering formwork, laying/pumping cover blocks, compaction and curing roughening the surface if special finish is to be provided (Excluding reinforcement and structural steel) etc. complete, with fully automatic micro processor based PLC enabled reversible Drum Type mixer/ concrete Batch mix plant (Pan mixer) etc. complete. With fine aggregate (Natural Sand) cum

Column footing

Column C1	2	X	6	X	5.30	X	4.60	X	0.90	=	263.30
Column No. C3	2	X	2	X	3.50	X	2.80	X	0.75	=	29.40
Column No.C2 END	2	X	3	X	3.20	X	2.60	X	0.75	=	37.44
Column No.Platform	8	X	2	X	1.00	X	1.00	X	0.40	=	6.40
										Total	336.54
										say	337.00

- 26 Providing and laying in situ /Ready Mix cement concrete M-30 of trap / granite /quartzite/ gneiss metal for cum R.C.C. work in foundations like raft, strip foundations, grillage and footings of R.C.C. columns and steel stanchions etc. including bailing out water, Steel centering formwork, laying/pumping cover blocks, compaction and curing roughening the surface if special finish is to be provided (Excluding reinforcement and structural steel) etc. complete, with fully automatic micro processor based PLC enabled reversible Drum Type mixer/ concrete Batch mix plant (Pan mixer) etc. complete. With fine aggregate (**Crushed sand VSI Grade**)

Provision	0	X	6	X	1.00	X	1.00	X	0.40	=	0.00
									Total		1.00
									say		0.50

- 27 Providing and laying Cast in situ/Ready Mix cement concrete M-30 of trap / granite /quartzite/ gneiss metal cum for R.C.C. columns as per detailed designs and drawing or as directed including steel centering, formwork, cover blocks, laying/pumping, compaction finishing the formed surfaces with cement mortar 1:3 of sufficient minimum thickness to give a smooth and even surface or roughening if special finish is to be provided and curing etc. complete,(Excluding reinforcement and structural steel).with fully automatic micro processor based PLC with SCADA enabled reversible Drum Type mixer/ concrete Batch mix plant (Panith (**Natural Sand**))

Column up to plinth

									Av.		
Column C1	2	X	6	X	1.00	X	0.60	X	2.70	=	19.44
Column No.C2	2	X	3	X	0.63	X	0.40	X	2.85	=	4.33
Column No. C3	2	X	2	X	0.637	X	0.608	X	2.85	=	4.42
Munim columns	2	X	7	X	0.230	X	0.230	X	1.80	=	1.33

Column above plinth

Column C1	2	X	6	X	0.23	X	0.35	X	3.00	=	2.90
Column No.C2	2	X	3	X	0.23	X	0.35	X	3.00	=	1.45
Column No. C3	2	X	2	X	0.23	X	0.637	X	3.00	=	1.76
Munim columns	2	X	7	X	0.230	X	0.350	X	3.00	=	3.38
Column No.Platform	8	X	2	X	0.35	X	0.23	X	3.20	=	4.12
Dummy col at rolling shutter	8	X	2	X	0.23	X	0.23	X	3.00	=	2.54

Total 45.66
say **46.00**

- 28 Providing and laying Cast in situ/Ready Mix cement concrete M-30 of trap / granite /quartzite/ gneiss metal cum for R.C.C. columns as per detailed designs and drawing or as directed including steel centering, formwork, cover blocks, laying/pumping, compaction finishing the formed surfaces with cement mortar 1:3 of sufficient minimum thickness to give a smooth and even surface or roughening if special finish is to be provided and curing etc. complete,(Excluding reinforcement and structural steel).with fully automatic micro processor based PLC with SCADA enabled reversible Drum Type mixer/ concrete Batch mix plant (**Crushed sand VSI Grade**)

Provision	0	x	16	x	0.15	x	0.23	X	2.55	=	0.00
									Total		1.00
									say		0.50

- 29 Providing and laying Cast in situ/Ready Mix cement concrete M-30 of trap / granite /quartzite/ gneiss metal cum for R.C.C. beams and lintels as per detailed designs and drawings or as directed including steel centering, formwork, cover blocks, laying/pumping, compactionand roughening the surface if special finish is to be provided and curing etc. complete. (Excluding reinforcement and structural steel). with fully automatic micro processor based PLC with SCADA enabled reversible Drum Type mixer/ concrete Batch mix plant (Pan mixer) etc. complete. With fine aggregate (Natural Sand)

Ground Beam

C1-C1 middle	2	X	5	X	6.834	X	0.35	X	0.60	=	14.35
C1-C3 end wall	2	X	2	X	6.83	X	0.35	X	0.60	=	5.74
C3-C2	2	X	2	X	6.59	X	0.35	X	0.60	=	5.54
C2-C2	1	X	2	X	6.693	X	0.35	X	0.60	=	2.81

Plinth Beam (Patli)

C1-C1 middle	2	X	2	X	6.834	X	0.35	X	0.23	=	2.20
C1-C3 end wall	2	X	2	X	6.83	X	0.35	X	0.23	=	2.20
C3-C2	2	X	2	X	6.59	X	0.35	X	0.23	=	2.12
C2-C2	1	X	2	X	6.693	X	0.35	X	0.23	=	1.08

lintel Above V1

C1-C1 middle	2	X	2	X	1.75	X	0.23	X	0.15	=	0.24
C1-C3 end wall	2	X	2	X	1.75	X	0.23	X	0.15	=	0.24

C3-C2	0	X	2	X	1.75	X	0.23	X	0.15	=	0.00
C2-C2	0	X	2	X	1.75	X	0.23	X	0.15	=	0.00
Door Beam											
C1-C1 middle	2	X	5	X	6.834	X	0.23	X	0.45	=	7.07
C1-C3 end wall	2	X	2	X	6.83	X	0.23	X	0.45	=	2.83
C3-C2	2	X	2	X	6.59	X	0.23	X	0.45	=	2.73
C2-C2	1	X	2	X	6.693	X	0.23		0.45	=	1.39
Platform beam											
PB2	4	X	2	X	1.90	X	0.23	X	0.60	=	2.10
PB1	1	X	4	X	6.75	X	0.23	X	0.60	=	3.73
PB3	1	X	4	X	6.750	X	0.35	X	0.60	=	5.67
OFFSET	1	X	4	X	6.750	X	0.205	X	0.15	=	0.83
OFFSET	2	X	4	X	1.900	X	0.205	X	0.15	=	0.47
										Total	63.32
										say	64.00

Provision	2	X	8	X	1.950	X	0.23	X	0.20	=	1.00
									Total		1.00
									say		0.50

[illegible]

Provision	2 x 8 x 1.55 x 0.520 x 0.075 =	1.00
	say	1.00
		0.50

PLATFORM SLAB	2	X	8	X	6.10	X	1.800	X	0.20	=	35.14
Ramp	1	X	0	X	3.00	X	3.500	X	0.20	=	0.00
Dock Leveller	0	X	4	X	5.00	X	5.000	X	0.20	=	0.00
									Total		35.14
									say		36.00

- 34 Providing and laying Cast in situ/Ready Mix cement concrete M-30 of trap/ granite / quartzite/ gneiss metal for R.C.C. slabs and landings as per detailed designs and drawings including steel centering, formwork, cover blocks, laying/pumping, compaction finishing the formed surfaces with cement mortar 1:3 of sufficient minimum thickness to give a smooth and even surface or roughening if special finish is to be provided and curing etc. complete,(Excluding reinforcement and structural steel).with fully automatic micro processor based PLC with SCADA enabled reversible Drum Type mixer/ concrete Batch mix plant (Pan mixer) etc. complete. With fine aggregate (Crushed sand VSI Grade)

Provision	1	X	2	X	3.00	X	3.500	X	0.20	=	1.00
									Total		1.00
									say		0.50

- 35 Providing second class Burnt Brick masonry with conventional/ I.S. type bricks in cement mortar 1:6 in cum superstructure including striking joints, raking out joints, watering and scaffolding etc. Complete (Natural Sand)

For PANEL

C1-C1 middle	2	X	2	X	6.834	X	0.23	X	2.55	=	16.03
C3-C1 middle end	2	X	2	X	6.83	X	0.23	X	2.55	=	16.02
C3-C2	2	X	2	X	6.59	X	0.23	0	2.55	=	15.46
C2-C2 E	1	X	2	X	4.193	X	0.23	X	2.55	=	4.92

Deduction for									Total		52.43
Munim columns	2	X	7	X	0.35	X	0.23	X	2.55	=	2.87
Rolling shutters	2	X	8	X	2.10	X	0.23	X	2.55	=	19.71
V1	2	X	12	X	0.6	X	0.23	X	0.6	=	1.99

V1, Lintel										=	
C2 near R.S.										=	2.54
Bed block below V1 ,etc	2	X	12	X	0.6	X	0.23	X	0.10	=	0.33
									Total deduction		27.44
									net		25.00
									say		25.00

- 36 Providing second class Burnt Brick masonry with conventional/ I.S. type bricks in cement mortar 1:6 in cum superstructure including striking joints, raking out joints, watering and scaffolding etc. Complete(Crushed sand VSI Grade)

Provision	2	X	12	X	0.60	X	0.35	X	0.10	=	1.00
									net		1.00
									say		0.50

- 37 Providing and laying Cast in situ/Ready Mix cement concrete in M15 of trap/ granite/quartzite/gneiss metal cum for bed blocks, foundation blocks and such other items including bailing out water, Steel centering, formwork, laying/ pumping, compacting, roughening them if special finish is to be provided, finishing uneven and honeycombed surface and curing etc. complete. The Cement Mortar 1:3 plaster is considered for rendering uneven and honeycombed surface only. Newly laid concrete shall be covered by gunny bag, plastic, tarpaulin etc. (Wooden centering will not be allowed.), with fully automatic micro processor based PLC with SCADA enabled reversible Drum Type mixer/ concrete Batch mix plant (Pan mixer) etc. complete. With fine aggregate (Crushed sand VSI Grade) (Natural Sand)

Below V1	2	X	12	X	0.6	X	0.23	X	0.1	=	0.33
At fire bucket	2	X	3	X	0.20	X	0.20	X	0.35	=	0.08
ladder bedblock	1	X	6	X	0.20	X	0.20	X	0.35	=	0.08
									Total		0.50
									say		1.00

- 38 Providing and laying Cast in situ/Ready Mix cement concrete in M15 of trap/ granite/quartzite/gneiss metal cum for bed blocks, foundation blocks and such other items including bailing out water, Steel centering, formwork, laying/ pumping, compacting, roughening them if special finish is to be provided, finishing uneven and honeycombed surface and curing etc. complete. The Cement Mortar 1:3 plaster is considered for rendering uneven and honeycombed surface only. Newly laid concrete shall be covered by gunny bag, plastic, tarpaulin etc. (Wooden centering will not be allowed.), with fully automatic micro processor based PLC with SCADA enabled reversible Drum Type mixer/ concrete Batch mix plant (Pan mixer) etc. complete. With fine aggregate (Crushed sand VSI Grade)

Provision	1	X	6	X	0.20	X	0.20	X	0.35	=	1.00
									Total		1.00
									say		0.50

- 39 Providing internal cement plaster 15 mm thick in Single coats in cement mortar 1:4 without neeru finish, to concrete, brick surface, in all positions including scaffolding and curing etc.complete.(Natural Sand) sqm

Outside

Long wall	1	X	2	X	52.70	X	3.00	=	316.18
short wall	1	X	2	X	29.16	X	3.00	=	174.95
R S Jams	2	X	4	X	7.20	X	0.23	=	13.25

Weather sheds over

V1 top, bottom	2	x	12	x	1.55	x	0.45	=	16.74
Sides	4	X	12	X	0.450	X	0.08	=	1.62

Total 522.73
Net 522.73
Say **523.00**

- 40 Providing internal cement plaster 15 mm thick in Single coats in cement mortar 1:4 without neeru finish, to concrete, brick surface, in all positions including scaffolding and curing etc.complete.(Crushed sand VSI Grade)

Provision	2	X	4	X	7.20	X	0.23	=	0.00
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Total 1.00
Net 1.00
Say **0.50**

- 41 Providing cement plaster 20mm thick in C.M. 1:4 inside to the W.H. bldg. with neeru & smooth finish to concrete or brick surface in all positions including scaffolding curing etc. complete as directed (Natural Sand)

Inside

Long wall	1	X	2	X	52.00	X	3.23	=	335.89
	1	X	2	X	28.46	X	3.23	=	183.84

Deduction rolling shutter	2	X	2	X	2.1	X	2.5	=	21.00
Total									519.73
Dedu.									21.00
Net									498.73
Say									499.00

- 42 Providing cement plaster 20mm thick in C.M. 1:4 inside to the W.H. bldg. with neeru & smooth finish to concrete or brick surface in all positions including scaffolding curing etc. complete as directed (Crushed sand VSI Grade)

Provision	2	X	2	X	0.00	X	3.35	=	0.00
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Total 0.00
Say **0.50**

- 43 Providing cement plaster 20mm thick in C.M. 1:4 outside to the W.H. bldg. With CEMENT smooth finish to concrete or brick surface in all positions including scaffolding curing etc. complete as directed (Natural Sand)

Outside

Apron L/W	1	X	2	X	55.60	X	0.60	=	66.72
S/W	1	X	2	X	31.16	X	0.60	=	37.39
Gutter L/W	1	X	2	X	53.90	X	1.95	=	210.19
S/W	1	X	2	X	29.20	X	1.95	=	113.87
Long wall plinth	1	X	2	X	52.696	X	1.20	=	126.47
short wall plinth	1	X	2	X	29.158	X	1.20	=	69.98

Total 624.62
Say **625.00**

- 44 Providing cement plaster 20mm thick in C.M. 1:4 outside to the W.H. bldg. With CEMENT smooth finish to concrete or brick surface in all positions including scaffolding curing etc. complete as directed (Crushed sand VSI Grade)

Provision	2	X	2	X	0.00	X	1.95	=	0.00
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Total 1.00
Say **0.50**

- 45 Providing cement plaster 12 mm thick in C.M. 1:3 (Weathershed) with even and smooth finish to concrete /brick surface in all positions including scaffolding curing etc. complete as directed.(Natural Sand) Sqm

Total 0.00
Say **0.00**

- 46 Providing cement plaster 12 mm thick in C.M. 1:3 (Weathershed) with even and smooth finish to concrete /brick surface in all positions including scaffolding curing etc. complete as directed.(Crushed sand VSI Grade)

Provision	2	X	16	X	0.450	X	0.08	=	1.00
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[illegible]

54	Providing & fixing steel grill rolling shutter with fabricated from 20 gauge steel laths with side guides, sqm bottom rails, brackets of 10 G.M.S. sheet door suspension shaft, rolling springs, locking arrangements with not less than 6mm thick strip and c										
Qty	1	x	8	x	2.10	x	2.55	x	0.00		42.84
									Total		42.84
									Say		43.00
55	P & f Steel rolling shutter 20 gauge with Mechanical gear arrangement sqm										
Qty	0	x	2		3.00	x	3.50	x	0.00		0.00
									Total		0.00
									Say		0.00
56	Filling in plinth with approved excavated stuff obtained from departmental land including watering, cum compacting etc. complete as directed.(Bd. A.10/262)										
Qty received from excavation									Total	10.00	
									Say	10.00	
57	Providing Hard Murum cohesive non-swelling materials in plinth in layers of 20 cms etc. complete as cum directed. [Only compacted thickness is payable][Rd.23/202 & Rd.28/205].										
Main bldg.	1	X	1	X	52.00	X	28.46	X	0.75	=	1109.78
Back filling											277.44
Apron											
Long	1	X	2	X	53.44	X	0.37	X	0.45	=	17.79
Short	1	X	2	X	28.46	X	0.37	X	0.45	=	9.48
Below apron& gutter											
Long	1	X	2	X	55.596	X	1.5	X	0.45	=	75.05
Short	1	X	2	X	31.158	X	1.5	X	0.45	=	42.06
Deduction for											
O.S.metal in plinth											
Long	1	X	2	X	52.00	X	0.60	X	0.60	=	-37.44
Short	1	X	2	X	27.26	X	0.60	X	0.60	=	-19.63
									Total	1474.55	
									Say	1475.00	
58	Compacting the hard murum side widths including laying in layers on each side with vibratory roller sqm including artificial watering etc. complete.										
Main bldg.	1	X	4	X	52.00	X	28.46			=	5918.81
Deduction for O.S.metal in											
Long	1	X	3	X	52.00	X	0.60			=	-93.59
	1	X	3	X	27.26	X	0.60			=	-49.06
									Total	5776.15	
									Say	5777.00	
59	Providing & laying stone metal layer of 20 cm thickness with 60 mm over size metal 65% and 40 mm size cum metal 35% with sand or stone chips spreading & leveling handpacking complete.[Rd.22/201,Rd.20/200 & Rd.20/205]										
Main bldg.	1	X	1	X	52.00	X	28.46	X	0.20	=	295.94
Apron											
Long	1	X	2	X	53.44	X	0.37	X	0.18	=	7.12
Short	1	X	2	X	31.16	X	0.37	X	0.18	=	4.15
O.S.metal in plinth along											
Long	1	X	2	X	52.00	X	0.60	X	0.60	=	37.44
	1	X	2	X	27.26		0.60		0.60	=	19.63
									Total	364.27	
									Say	364.30	
60	Compacting the sub grade / gravel / size metal (100 mm loose) layers for all widths with Power roller having sqm weight 8 to 10 MT. including necessary, labour, materials and artificial watering complete.										
Main bldg.	1	X	1	X	52.00	X	28.46			=	1479.70
O.S.metal in plinth along											
Long	1	X	3	X	52.00	X	0.60			=	93.59
	1	X	3	X	27.26	X	0.60			=	49.06

Total	1622.36
Say	1622.40

- 61 Providing and laying in situ Tremix Cement Concrete M -20, with Natural Sand, with Tremix treatment for Sq.M 150 mm thickness for flooring with groove cutting of 4 mm wide and 20 mm deep at every 4.00 m c/c both sides with necessary refilling with bitumen,etc. complete as directed by Engineer Incharge.With fine aggregate (Natural Sand / Crushed sand VSI Grade finely washed etc (Natural Sand)

Main bldg.	1	X	1	X	52.00	X	28.46		=	1479.70
								Total		1479.70
								Say		1479.70

- 62 Providing and laying in situ Tremix Cement Concrete M -20, with Natural Sand, with Tremix treatment for Sq.M 150 mm thickness for flooring with groove cutting of 4 mm wide and 20 mm deep at every 4.00 m c/c both sides with necessary refilling with bitumen,etc. complete as directed by Engineer Incharge.With fine aggregate (Crushed sand VSI Grade finely washed etc

Provision	1	X	2	X	0.00	X	0.00		=	1.00
								Total		1.00
								Say		0.50

- 63 Providing and casting in situ / ready mix PCC M15 grade of trap metal for coping to head walls / parapet including centering, form work, compaction and curing etc. complete. (Natural Sand)

Apron										
Long	2	X	2	X	53.90	X	0.60	X	0.10	= 12.94
Short	2	X	2	X	52.00	X	0.60	X	0.10	= 12.48
Coping over gutter										
Long	2	X	2	X	55.60	X	0.45	X	0.10	= 10.01
Short	2	X	2	X	30.46	X	0.45	X	0.10	= 5.48
								Total		40.90
								Say		40.90

- 64 Providing and casting in situ / ready mix PCC M15 grade of trap metal for coping to head walls / parapet including centering, form work, compaction and curing etc. complete. ((Crushed sand VSI Grade)

Provision	2	X	2	X	2.00	X	0.45	X	0.10	= 1.00
								Total		1.00
								Say		0.50

- 65 Providing & fixing M.S. angle 50 x 50 x 6 mm with holdfasts at doorsills including fixing in bed concrete and RMT then applying three coats of oil paint etc. complete [Bd.C.2/275]

For Platforms	2	X	8	X	2.70				=	43.20
								Total		43.20
								Say		43.20

- 66 Providing and fabricating structural steel work in rolled sections like joists, channels, angles, tees etc. as per detailed design and drawings or as directed including cutting, fabricating, hoisting, erecting, fixing in position making riveted / bolted /welded connections without connecting plates, braces etc. and including one coat of anticorrosive paint and over it two coats of oil painting of approved quality and shade etc. complete.

For Platforms	2	X	8	X	9.70	X	16.80	Kg/M.	=	2607.36
@ 16.80 kg/m										
Holdfasts 20 mm dia	16	X	9	X	0.60	X	2.50	Kg/M.	=	216.00
@ 2.50 kg/m										
L50x50x6 mm for fire bucket.									=	180.00
@ 4.50 kg/m								Total		3003.36
								Say		3004.00

- 67 Providing & Fixing in position M.S. ladder of 45 cms width made out 50 x 50 x 6 mm two angles for rails RMT and M.S. angle stiffeners at three places as directed with M.S. round bars of 20 mm dia for steps @ every 30 cm c/c including fixing

	0	X	1	X	8.00				=	0.00
								Total		0.00
								Say		0.00

- | | | | | | | |
|---|---|----|---|-------|---|--------------|
| 1 | X | 12 | X | | = | 12.00 |
| | | | | Total | | 12.00 |
| | | | | Say | | 12.00 |

- | | | | | | | | | |
|---|---|---|---|------|---|------|-------|-------------|
| 1 | X | 1 | X | 0.45 | X | 0.60 | = | 0.27 |
| | | | | | | | Total | 0.27 |
| | | | | | | | Say | 0.27 |

- | | |
|--------|--------------|
| I-1-A | 0.00 |
| I-1A' | 0.00 |
| I-1A'' | 0.00 |
| Total | 0.00 |
| Sav | 10.00 |

- | | | | |
|-----|-------|--|---------------|
| 1-A | | | 859.00 |
| | | | 859.00 |
| | Total | | 859.00 |
| | Sav | | 859.00 |

- | | | | | | | | | | | | | |
|--------------------|---|---|---|---|--------|---|------|---|-------|---|---------------|--|
| Column footing | | | | | | | | | | | | |
| Column C1 | 2 | X | 6 | X | 5.6 | X | 4.9 | X | 0.60 | = | 197.57 | |
| Column No. C3 | 2 | X | 2 | X | 3.8 | X | 3.1 | X | 0.60 | = | 28.27 | |
| Column No.C2 END | 2 | X | 3 | X | 3.5 | X | 2.9 | X | 0.60 | = | 36.54 | |
| Column No.Platform | 4 | X | 3 | X | 1.3 | X | 1.3 | 1 | 0.60 | = | 12.17 | |
| APRON long | 1 | X | 2 | X | 55.796 | X | 1.28 | X | 0.23 | = | 32.85 | |
| APRON short | 1 | X | 2 | X | 29.698 | X | 1.28 | X | 0.23 | = | 17.49 | |
| | | | | | | | | | Total | | 324.89 | |
| Provision | | | | | | | | | say | | 324.89 | |

- | | | | | | | | | | | | |
|------------------|---|---|---|---|-------|---|-------|--------------|---|----------------|-----|
| Provision | 1 | X | 1 | X | 52.00 | X | 28.46 | | = | 1479.70 | Sqm |
| | | | | | | | | Total | = | 1480 | |
| | | | | | | | | Say | = | 1480.00 | |

- 74 Providing and laying Cast in situ/Ready Mix cement concrete in M-25 of trap/ granite/ quartzite/ gneiss Cum metal for R.C.C. pardi of required thickness including steel centering, formwork, cover blocks, laying/pumping, compacting and roughening them if special finish is to be provided and curing complete. (Excluding reinforcement and structural steel).with fully automatic micro processor based PLC with SCADA enabled reversible Drum Type mixer/ concrete Batch mix plant (Pan mixer) etc. complete. With fine aggregate (Crushed sand VSI Grade)

Provision for Plinth Padadi	1	X	1	X					=	10.00
									Total	= 10.00
									Say	= 10.00

- 75 Providing and fixing colour coated Zinalume (R) AZ150 (min 150 gms/sq.mt. total on each side) profiled Sqm sheets for roofing. The feed material is manufactured out of nominal 0.45 mm Base Metal Thickness (BMT) (0.5 mm TCT), Hi-strength steel with min.550 MPa yield strength, metallic hot dip coated with Aluminium-Zinc alloy (55% aluminium 43.4% zinc 1.6% silicon) with COLORBOND (R) steel quality super durable polyester paint coat (with inorganic pigment). The paint shall have a total coating thickness of nominal 35 um, comprising of nominal 25 um exterior coat on top surface and nominal 10 um reverse coat on back surface. Profile sheet shall have nom. 950-1050 mm effective cover width and nominal 25-30 mm deep ribs with subtle square fluting in the five pan at nominal 180-250 mm centerto-center. The end rib shall be designed for anti-capillary groove. and return leg. The feed material should have coil manufacturers product details marked a regular interval. Including fasteners with min. fastened with min. 25 um Zinc-Tin alloy coated, Hex head, self-drilling screw etc. complete. (weight of profile 4.52 Kilogram/Square Metre)

Provision	1	X	1	X					=	10.00
									Total	= 10.00
									Say	= 10.00 Sqm

- 76 Providing and fixing csmisa electro hydraulic dock leveler of size 2.20 x2.50 m comprising of platform with Nos hinged lip made of profiled, antislip steel and hydraulic powwer pack suitable for uniformly distributed load of 15 T (or point load of 6 T as defined by EN 1398 totally concentrated on one axel of fork lift truck, devided on two wheel prints of 150 x 150 mm at 1 m distance) with standerd accessories and bumpers etc. complete. as directed by engineer incharge.

Provision	0	X	2	X					=	0.00
									Total	= 0.00
									Say	= 0.00

Part - B :- PEB work

- 1 Above Plinth PEB Structure - providing & errecting PEB structure with zincallume sheets etc.complete. Sqm

1	X	1	X	51.604	X	28.050		=	1447.4922
0	X	1	X	52.150	X	28.374		=	0
								Total	= 1447.49
								Say	= 1448.00

- 2 Turbo ventilator 24"

1	X	14						=	14.00
								Total	= 14.00
								Say	= 14.00

Jr.Engineer
MSWC,Aurangabad

Dy.Manager (Engg.)
MSWC,Aurangabad