KCCI Krish Cold Chain & Infrastructure Pvt. Ltd.

GSTIN : [illegible]
PAN : [illegible]
CIN : [illegible]

[illegible] POCKET [illegible], PHASE [illegible], [illegible] VIHAR, DELHI [illegible]
Phone : [illegible]

REF :-KCCI/20/2024-25 DATE:-29-07-24

To,
Paloma Realty
Kanpur site

Kind Attention :-Mr.Gopal Verma Ji

Dear Sir,
Please find the attachment of BOQ,

BILLS OF QUANTITIES

PALOMA REALTY, KANPUR *PILING WORK*

BILLS OF QUANTITIES

DRAFT

SR. NO.	*PARTICULARS*	*UNIT*	*RATE*	*QUANTITY*	*AMOUNT*
1.0	PILING WORK				
1.1	Mobilisation of work site with all necessary plants, equipments, piling rigs necessary personne and erecting them etc. complete and on completion of piling work demobilising site with all the plants, equipments, piling rigs, necessary personnel brought to site including clearing and reinstating site to original condition acceptable to the PM.	Lumpsum			₹ 3,00,000.00
1.2	Providing and constructing cast in situ bored Piles using rotary drilling rigs. Scope includes drilling through all type of strata up to founding level accordance with the Structural drawing including setting out cardinal points, boring in over burden through all stratas including soft rock, dewatering including socketing in rock, placing and withdrawal of steel casing upto non collapsible strata or as instructed wherever required, disposal of bored material outside the site at approved location by local authority as per their rules & regulation, irrespective of lead as directed, lowering the reinforcement cage, welding of new bars of specified dia with stitch weld and/or lap weld as per specification. (Working platform for piling work 5.0m below Basement 03) NOTE : THE CUT OFF LEVEL OF PILES IS (-17700mm w.r.t FFL) IN GENERAL AREA & (-15800 w.r.t FFL) IN LIFT AREA i) 750mm dia. Pile (300 MT)	Rmt	₹ 2,100.00	9853	₹ 2,06,97,000.00

BILLS OF QUANTITIES

DRAFT

SR. NO.	PARTICULARS	UNIT	RATE	QUANTITY	AMOUNT
1.4	Providing, machine mixing and laying designed mix / ready mix M35 grade reinforced cement concrete (RCC) using 20mm nominal size well graded approved quality aggregate and sand as per approved design mix as per IS code and with minimum cement content as per IS or as specified by Structural consultant, whichever is more; maximum water cement ratio 0.42 including using approved admixtures, vibrating / compacting, curing, scaffolding, cleaning, preparing surfaces, junctions, hacking steely surfaces to be plastered etc. complete but excluding the cost of Formwork and reinforcement to the entire satisfaction of the PM at all depths, heights, lifts and rates. (Concreting of piles to be carried out for 600mm above the cutoff level which will not be paid, being contaminated concrete)				
	i) 750mm dia Pile (300 nos)	Rmt	₹ 8,700.00	6053	₹ 3,64,67,200.00
1.5	Empty Boring measured from the working platform level to the cut-off levels of the piles. Further it shall be filled with approved dry sand. (Working platform level is considered as -14.75m level)	Rmt	₹ 2,500.00	1129	₹ 16,93,500.00
1.6	Providing and fixing steel reinforcement for RCC including transporting, de-coiling, straightening, cutting, bending and placing in position at all levels and binding with approved quality G.I. annealed binding wire of 19 gauge for end bearing cast-in-situ piles conforming to IS 2911, Part I with correct size PVC cover blocks or approved concrete cover blocks of same grade as of concrete. The rate shall include cost of binding wire, chairs, spacers, pins, which will not be measured separately for payment. Quantity of steel as per bar bending schedule as approved by the PM and with authorized overlaps only shall be measured and paid for. Further rebate where required carryout dewatering, provide required labour and machines / equipments / tools / tackles for handling, shifting, bending, cutting, etc. all complete to the satisfaction of the PM at all depths & leads.				
	High yield strength deformed bars conforming to IS 1786 - Fe 500 grade	KG	₹ 75.00	297209	₹ 2,22,08,175.00

BILLS OF QUANTITIES

DRAFT

NR. NO.	PARTICULARS	UNIT	RATE	QUANTITY	AMOUNT
1.7	Carry out load testing of cast-in-sit. reinforced cement concrete bored piles using Pile Driving Analyzer equipment conforming to ASTM D4945-15[9 through authorized licenced agency to carry out test by the manufacturer of machine and as approved by Structural Consultant. Equipment shall be able to record force and velocity by using strain and acceleration sensor. Test load shall be designed load. The hammer weight shall be minimum 1% of test load as recommended. Test report shall include ➢ Force velocity curve ➢ Pile capacity ➢ Shaft Friction ➢ End bearing ➢ Simulated static load test curve ➢ Net and tota pile displacement ➢ Pile integrity Test shall be carried out minimum 14 days after installation of pile. Report shall be submitted within 7 days of testing. i) 750mm dia with load carrying capacity 300 MT.	Nos.	₹1,50,000.00	9	₹13,50,000.00
1.9	Carry out high strain dynamic load testing of cast-in-situ reinforced cement concrete bored piles using Pile Driving Analyzer equipment conforming to ASTM D4945-12[9 through authorized licenced agency to carry out test by the manufacturer of machine and as approved by Structural Consultant. Equipment shall be able to record force and velocity by using strain and acceleration sensor. Test load shall be 1.5 x designed load. The hammer weight shall be minimum 1% of test load as recommended. Test report shall include ➢ Force velocity curve ➢ Pile capacity ➢ Shaft Friction ➢ End bearing ➢ Simulated static load test curve ➢ Net and total pile displacement ➢ Pile integrity Test shall be carried out minimum 14 days After Installation of pile. Report shall be submitted within 7 days of testing. i) 750mm dia with load carrying capacity 300 MT.	Nos.	₹ 2,00,000.00	1	₹ 3,00,000.00
1.8	Providing, supplying and submitted documented report on RCC bored pile integrity test using pile integrity tester on completion of secured setting of piles, preparation of heads, mobilising and demobilising of equipments all complete. Report should include graphical wave form, interpretation of results, cross sectional or material changes if any in, length of pile, concrete quantity etc. all complete as forming to ASTMD5882 and to satisfaction of the PM. i) 750mm dia with load carrying capacity 300 MT.	Nos.	₹ 2,300.00	817	₹ 18,79,100.00
1.10	Chipping and dressing of the R.C.C. piles upto length of 600mm including clearing reinforcement and removal of dismantled materials upto a distance of 50 meter beyond the building area etc. for providing pile caps. Spec complete as approved by PM				

BILLS OF QUANTITIES

DRAFT

NR. NO.	PARTICULARS	UNIT	RATE	QUANTITY	AMOUNT
	i) 750mm dia cast iron cast spacing capacity 300 MT.	Nos.	₹ 3,500.00	317	₹ 11,09,500.00
	SUB TOTAL OF PILING WORK				₹ 8,45,28,075.00
	Note :- GST will be Extra				

Any sought of further information required regarding this matter, we will be glad to furnish as same.
Thanking you and assuring you for our best services at all the time.

Yours faithfully,
Mr.Nitin Gupta (Director)
Krish Cold Chain & Infrastructure Pvt. Ltd.
M: +91 9868032246

		✓	
2	Disposal of all type excavated material.	✔	
3	Identification, Shifting / Removal, Diversion of Utilities, and other Services.		✓
4	Supply of: Electricity, Water and Area Illumination	✔	
5	The Client shall provide space for (Labour camp, Office Setup; Store Office and Reinforcement Cage Fabrications etc.) within the plot area. However, all the developments shall be in scope of Contractor.		✔
6	Security, Watch & Ward		✔
7	Providing / Supply of: Binding Wire, PVC or Concrete Cover Blocks, etc	✔	
8	Survey & Alignment Works		✔
9	Contractor All Risk (CAR) Policy		✔
10	All necessary Machinery and Equipment including Fuel, Filters and Wire Ropes etc. All necessary machinery	✔	
11	All necessary Manpower, Tools & Tackles complete etc.	✔	
12	All necessary permissions from Local Authorities for Day Night Works		✔
13	RA Bill will be prepared on fortnight/Monthly Basis and Payment will be done within 10 days after approval of		✓

Revised - 29/06/24

F QUANTITIES (Piling working Plateform is 3.0 meter to 8 mtr below base
Basement is approximate 15 mtr below from Ground Level

REALTY LLP , KANPUR , Project : PALOMA THE GRANDEUR *PILING WOI*

BILLS OF QUANTITIES ***Date :17;06;24***

PARTICULARS	*UNIT*	*RATE*	*QUANTITY*	
NG WORK				
ilisation and Demobilisation of work site with all necessary plants, equipments, g rigs, necessary personnel and erecting them etc. complete and on completion of k work demobilising site with all the plants, equipments, piling rigs, necessary onnel brought to site including cleaning and reinstating site to original condition ptable to the PM.	Lumpsum	*500000*		
iding and constructing **cast In situ bored Piles using rotary drilling rigs.** Scope des drilling through all type of strata up to founding level accordance with the ctural drawing, including setting out cardinal points, boring in over burden through tratas including soft rock, dewatering including socketing in rock, placing and drawal of steel casing upto non colapsible strata or as instructed wherever required, osal of bored material outside the site at approved location by PM as per their rules gulation, irrespective of lead as directed, lowering the reinforcement cage, welding ew bars of specified dia with stitch weld and/or lap weld as per specification. **rking platform for piling work 3.0mt to 8.0 mtr below Basement 03)**				
0mm dia. Pile (300 MT) length 30mtr	Rmt	*1700*	9856	
iding, machine mixing and laying **designed mix / ready mix M35 grade forced cement concrete (RCC),** using 20mm nominal size well-graded approved ty aggregate and sand as per approved design mix as per IS code and with mum cement content **400 Kg per Cum** as specified by Structural consultant imum water cement ratio 0.42 including using approved admixtures, . **(Concreting lles to be carried out for 600mm above the cutoff level which will not be paid, g contaminated concrete) Make of Cement Is Ultratech**	Rmt		9856	
0mm dia. Pile (300 MT) depth 30 Mtr	Rmt	*6950*	9856	

BILLS OF QUANTITIES **Date :17;06;24**

PARTICULARS	UNIT	RATE	QUANTITY
ng , machine mixing and laying **designed mix / ready mix M35 grade reinforced ient concrete (RCC)**, using 20mm nominal size well-graded approved quality regate and sand as per approved design mix as per IS code and with minimum ient content **400 Kg per Cum** as specified by Structural consultant maximum water ient ratio 0.42 including using approved admixtures, vibrating / compacting, curing, folding, cleaning, preparing surfaces, junctions. hacking closely surfaces to be tered etc. complete but excluding the cost of Formwork and reinforcement to the e satisfaction of the PM at all depths, heights, lifts and leads. (**Concreting of piles e carried out for 600mm above the cutoff level which will not be paid, being taminated concrete) Make of Cement is Ultratech**			
0mm dia. Pile (300 MT) depth 30 Mtr	Rmt	*250*	9856
ty Boring measured from the working platform level to the cut-off levels of the . Further it shall be filled with approved dry sand. (Working platform level is sidered as -14.75m level)	Rmt	*1400*	1129
viding **steel reinforcement for RCC**, at site			
n yield strength deformed bars conforming to IS 1786 - Fe 550 grade Make : A	KG	*70*	297309
ng steel reinforcement for RCC, including transporting, de-coiling, straightening, ng, bending, and placing in position at all levels and binding with approved quality annealed binding wire of 18 gauge for end bearing cast-in-situ piles conforming to 911, Part I with correct size PVC cover blocks or approved concrete cover blocks ame grade as of concrete. The rate shall include cost of binding wire, chairs, cers, pins, welding which will not be measured separately for payment. Quantity of l as per bar bending schedule as approved by the PM and with authorized overlaps shall be measured and paid for. Further include where required carryout atering, provide required labour and machines / equipments / tools / tackles for dling, shifting, bending, binding,welding etc. all complete to the satisfaction of the at all depths & leads.	KG	*5.5*	297309

BILLS OF QUANTITIES **Date :17;06;24**

PARTICULARS	UNIT	RATE	QUANTITY	
y out **load testing** of cast-in-situ reinforced cement concrete bored piles using Pile ing Analyzer equipment conforming to ASTM D4945 -1989 through authorized nced agency to carry out test by the manufacturer of machine and as approved by ctural Consultant. Equipment shall be able to record force and velocity by using n and acceleration sensor. **Test load shall be 1.5 times designed load.** The mer weight shall be minimum 1% of test load as recommended. t report shall include ➢ Force velocity curve ➢ Pile capacity ➢ Shaft Friction ➢ End bearing ➢ Stimulated static load test curve ➢ Net and total pile displacement ➢ Pile integrity : shall be carried out minimum 14 days after installation of pile. Report shall be nitted within 7 days of testing. 0mm dia with load carrying capacity 300 MT.	Nos.	380000	9	
y out high **strain dynamic load testing** of cast-in-situ reinforced cement concrete d piles using Pile Driving Analyzer equipment conforming to ASTM D4945 -1989 ugh authorized licenced agency to carry out test by the manufacturer of machine as approved by Structural Consultant. Equipment shall be able to record force and city by using strain and acceleration sensor. **Test load shall be 2.5 x designed l.** The hammer weight shall be minimum 1% of test load as recommended. : report shall include ➢ Force velocity curve ➢ Pile capacity ➢ Shaft Friction ➢ End bearing ➢ Stimulated static load test curve ➢ Net and total pile displacement ➢ Pile integrity				

BILLS OF QUANTITIES **Date :17;06;24**

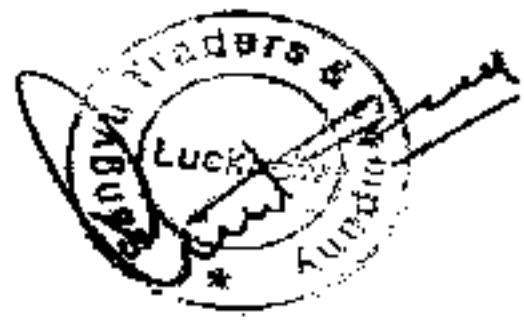
PARTICULARS	UNIT	RATE	QUANTITY	
: shall be carried out minimum 14 days after installation of pile. Report shall be nitted within 7 days of testing.				
0mm dia with load carrying capacity 300 MT.	Nos.	220000	1	
riding, conducting and submitted documented report on **RCC bored pile integrity** using pile integrity tester on completion of required setting of piles, preparation of ds, mobilising and demobilising of equipments all complete. Report should include hical wave form, interpretation of results, cross sectional or material changes if any ength of pile, concrete quantity etc. all complete on forming to ASTMD5882 and to sfaction of the PM.				
0mm dia with load carrying capacity 300 MT.	Nos.	1200	317	

BILLS OF QUANTITIES **Date :17;06;24**

PARTICULARS	UNIT	RATE	QUANTITY	
pping and dressing of the R.C.C. piles upto length of 600mm including cleaning forcement and removal of dismantled materials upto a distance of 50 meter beyond building area etc. for providing pile caps. c :complete as approved by PM 50mm dia with load carrying capacity 300 MT.	Nos.	4000	317	
3 TOTAL OF PILING WORK				1
I GST				
TAL OF PILING WORK				1

PEES : Eleven Crore Seventy Five Lakh Thirty Four Thousand Two Hundred Twenty Nine Rupees & Fifty Paisa Only)

te : Company will provide only water supply free of cost at one single point. Maintenanace and repairing will be in your scope
tric supply on chargebale basis and it will be provided at one single point.
ce for Site, Office , Store, Labour Hutmen only in plot area.
ning else will bo supplied by the company
ntity is tentative actual quntity as per site.



SR. NO.	PARTICULARS	UNIT	RATE	QUANTI	AMOUNT
1.0	**PILING WORK**				
1.1	**Mobilisation and Demobilisation of work site** with all necessary plants, equipments, piling rigs, necessary personnel and erecting them etc. complete and on completion of piling work demobilising site with all the plants, equipments, piling rigs, necessary personnel brought to site including cleaning and reinstating site to original condition acceptable to the PM.	Lumpsum	*500000*	1	*500000*
1.2	Providing and constructing **cast in situ bored Piles using rotary drilling rigs**. Scope includes drilling through all type of strata up to founding level accordance with the Structural drawing, including setting out cardinal points, boring in over burden through all stratas including soft rock dewatering including socketing in rock, placing and withdrawal of steel casing upto non colapsible strata or as instructed wherever required, disposal of bored material outside the site at approved location by PM as per their rules & regulation. irrespective of lead as directed, lowering the reinforcement cage, welding of new bars of specified dia with stitch weld and/or lap weld as per specification. **(Working platform for piling work 3.0mt to 8.0 mtr below Basement 03)**				
	i) 750mm dia. Pile (300 MT) length 30mtr	Rmt	*3400*	9856	33510400
1.3	Providing, machine mixing and laying **designed mix / ready mix M35 grade reinforced cement concrete (RCC)**, using 20mm nominal size well-graded approved quality aggregate and sand as per approved design mix as per IS code and with minimum cement content **400 Kg per Cum** as specified by Structural consultant maximum water cement ratio 0.42 including using approved admixtures, . **(Concreting of piles to be carried out for 600mm above the cutoff level which will not be paid, being contaminated concrete) Make of Cement is Ultratech**	Rmt	*8600*	9856	
	i) 750mm dia. Pile (300 MT) depth 30 Mtr				
1.4	Laying , machine mixing and laying **designed mix / ready mix M35 grade reinforced cement concrete (RCC)**, using 20mm nominal size well-graded approved quality aggregate and sand as per approved design mix as per IS code and with minimum cement content **400 Kg per Cum** as specified by Structural consultant maximum water cement ratio 0.42 including using approved admixtures, vibrating / compacting, curing, scaffolding, cleaning, preparing surfaces, junctions, hacking closely surfaces to be plastered etc. complete but excluding the cost of Formwork and reinforcement to the entire satisfaction of the PM at all depths, heights, lifts and leads. **(Concreting of piles to be carried out for 600mm above the cutoff level which will not be paid, being contaminated concrete) Make of Cement is Ultratech**				
	i) 750mm dia. Pile (300 MT) depth 30 Mtr	Rmt	*6000*	9856	59136000
1.5	**Empty Boring** measured from the working platform level to the cut-off levels of the piles. Further it shall be filled with approved dry sand (Working platform level is considered as -14.75m level)	Rmt	*3000*	1129	3387000
1.6	Providing **steel reinforcement for RCC**, at site				
	High yield strength deformed bars conforming to IS 1786 - Fe 550 grade Make : TATA	KG	*75*	297309	22298175
1.6 A	Fixing **steel reinforcement for RCC**, including transporting, de-coiling, straightening, cutting, bending, and placing in position at all levels and binding with approved quality G.I. annealed binding wire of 16 gauge for end bearing cast-in-situ piles conforming to IS 2911, Part I with correct size PVC cover blocks or approved concrete cover blocks of same grade as of concrete. The rate shall include cost of binding wire, chairs, spacers, pins, welding which will not be measured separately for payment. Quantity of steel as per bar bending schedule as approved by the PM and with authorized overlaps only shall be measured and paid for. Further include where required carryout dewatering, provide required labour and machines / equipments / tools / tackles for handling, shifting, bending, binding,welding etc. all complete to the satisfaction of the PM at all depths & leads.	KG	*15*	297309	

	➢ Net and total pile displacement ➢ Pile integrity Test shall be carried out minimum 14 days after installation of pile. Report shall be submitted within 7 days of testing. i) 750mm dia with load carrying capacity 300 MT.	Nos.	450000	9	1050000
1.8	Carry out high **strain dynamic load testing** of cast-in-situ reinforced cement concrete bored piles using Pile Driving Analyzer equipment conforming to ASTM D4945 -1989 through authorized licensed agency to carry out test by the manufacturer of machine and as approved by Structural Consultant. Equipment shall be able to record force and velocity by using strain and acceleration sensor **Test load shall be 2.5 x designed load.** The hammer weight shall be minimum 1% of test load as recommended. Test report shall include ➢ Force velocity curve ➢ Pile capacity ➢ Shaft Friction ➢ End bearing ➢ Stimulated static load test curve ➢ Net and total pile displacement ➢ Pile integrity Test shall be carried out minimum 14 days after installation of pile. Report shall be submitted within 7 days of testing. i) 750mm dia with load carrying capacity 300 MT.	Nos.	575000	1	575000
1.9	Providing, conducting and submitted documented report on **RCC bored pile integrity test** using pile integrity tester on completion of required setting of piles, preparation of heads, mobilising and demobilising of equipments all complete. Report should include graphical wave form, interpretation of results, cross sectional or material changes if any in, length of pile, concrete quantity etc. all complete on forming to ASTMD5882 and to satisfaction of the PM. i) 750mm dia with load carrying capacity 300 MT.	Nos	7000	317	2219000

	the building area etc. for providing pile caps. Spec : complete as approved by PM I) 750mm dia.with load carrying capacity 300 MT.	Nos.	14750	317	46,75,750
	SUB TOTAL OF PILING WORK				1303513.35
	Add GST @ 18%				**2,34,63,238.50**
	TOTAL OF PILING WORK				**15,38,14,563.50**
	(RUPEES				

Note : Company will provide only water supply free of cost at one single point. Maintenanace and repairing will be in your scope

Electric supply on chargebale basis and it will be provided at one single point.

Space for Site, Office , Store, Labour Hutmen only in plot area.

Nothing else will be supplied by the company

Quantity is tentative actual quntity as per site.

BILLS OF QUANTITIES (Piling working Plateform is 3.0 meter to 8 mtr below basement 3 Basement is approximate 15 mtr below from Ground Level

M/s PALOMA REALTY LLP , KANPUR, Project : PA[redacted]GRANDEUR" *PILING WORK*

BILLS OF QUANTITIES *Date :17;06;24*

DRAFT

SR. NO.	*PARTICULARS*	*UNIT*	*RATE*	*QUANTITY*	*AMOUNT*
1.0	**PILING WORK**				
1.1	**Mobilisation and Demobilisation of work site** with all necessary plants, equipments, piling rigs, necessary personnel and erecting them etc. complete and on completion of piling work demobilising site with all the plants, equipments, piling rigs, necessary personnel brought to site including cleaning and reinstating site to orighal condition acceptable to the PM.	Lumpsum	*500000*		*500000*
1.2	Providing and constructing **cast in situ bored Piles using rotary drilling rigs.** Scope Includes drilling through all type of strata up to founding level accordance with the Structural drawing, Including setting out cardinal points, boring in over burden through all strates including soft rock, dewatering including socketing in rock, placing and withdrawal of steel casing upto non colapsible strata or as instructed wherever required, disposal of bored material outside the site at approved location by PM as per their rules & regulation, irrespective of lead as directed, lowering the reinforcement cage, welding of new bars of specified dia with stitch weld and/or lap weld as per specification. **(Working platform for piling work 3.0mt to 8.0 mtr below Basement 03)**				
	i) 750mm dia. Pile (300 MT) length 30mtr	Rmt	*1651*	9856	16262400
1.3	Providing, machine mixing and laying **designed mix / ready mix M35 grade reinforced cement concrete (RCC)**, using 20mm nominal size well-graded approved quality aggregate and sand as per approved design mix as per IS code and with minimum cement content **400 Kg per Cum** as specified by Structural consultant maximum water cement ratio 0.42 including using approved admixtures. . **(Concreting of piles to be carried out for 600mm above the cutoff level which will not be paid, being contaminated concrete) Make of Cement is Ultratech**	Rmt		8856	
	I) 750mm dia. Pile (300 MT) depth 30 Mtr				

M/S PALOMA REALTY LLP , KANPUR , Project : PALOMA THE GRANDEUR — PILING WORK

BILLS OF QUANTITIES — Date :17;06;24

DRAFT

SR. NO.	PARTICULARS	UNIT	RATE	QUANTITY	AMOUNT
1.4	Laying , machine mixing and laying **designed mix / ready mix M35 grade reinforced cement concrete (RCC)**, using 20mm nominal size well-graded approved quality aggregate and sand as per approved design mix as per IS code and with minimum cement content **400 Kg per Cum** as specified by Structural consultant maximum water cement ratio 0.42 including using approved admixtures, vibrating / compacting, curing, scaffolding, cleaning, preparing surfaces, junctions, hacking closely surfaces to be plastered etc. complete but excluding the cost of Formwork and reinforcement to the entire satisfaction of the PM at all depths, heights, lifts and leads. **(Concreting of piles to be carried out for 600mm above the cutoff level which will not be paid, being contaminated concrete) Make of Cement is Ultratech**				
	I) 750mm dia. Pile (300 MT) depth 30 Mtr	Rmt	7200	9850	70963200
1.5	**Empty Boring** measured from the working platform level to the cut-off levels of the piles. Further it shall be filled with approved dry sand. (Working platform level is considered as -14.75m level)	Rmt	1400	1129	1580600
1.6	Providing **steel reinforcement for RCC**, at site				
	High yield strength deformed bars conforming to IS 1786 - Fe 550 grade Make : TATA	KG	75	297309	22298175
1.6 A	Fixing **steel reinforcement for RCC**..inducing transporting, de-coiling, straightening, cutting, bending, and placing in position at all levels and binding with approved quality G.I. annealed binding wire of 18 gauge for end bearing cast-in-situ piles conforming to IS 2911, Part I with correct size PVC cover blocks or approved concrete cover blocks of same grade as of concrete. The rate shall include cost of binding wire, chairs, spacers, pins, welding which will not be measured separately for payment, Quantity of steel as per bar bending schedule as approved by the PM and with authorized overlaps only shall be measured and paid for. Further include where required carryout dewatering, provide required labour and machines / equipments / tools / tackles for handling, shifting, bending, binding,welding etc. all complete to the satisfaction of the PM at all depths & leads.	KG		297309	

BILLS OF QUANTITIES — Date :17;06;24

DRAFT

SR. NO.	PARTICULARS	UNIT	RATE	QUANTITY	AMOUNT
1.7	Carry out **load testing** of cast-in-situ reinforced cement concrete bored piles using Pile Driving Analyzer equipment conforming to ASTM D4945 -1989 through authorized licenced agency to carry out test by the manufacturer of machine and as approved by Structural Consultant. Equipment shall be able to record force and velocity by using strain and acceleration sensor. **Test load shall be 1.5 times designed load.** The hammer weight shall be minimum 1% of test load as recommended. Test report shall include ➢ Force velocity curve ➢ Pile capacity ➢ Shaft Friction ➢ End bearing ➢ Stimulated static load test curve ➢ Net and total pile displacemen. ➢ Pile integrity Test shall be carried out minimum 14 days after installation of pile. Report shall be submitted within 7 days of testing. i) 750mm dia with load carrying capacity 300 MT.	Nos.		9	-
1.8	Carry out high **strain dynamic load testing** of cast-in-situ reinforced cement concrete bored piles using Pile Driving Analyzer equipment conforming to ASTM D4945 -1989 through authorized licenced agency to carry out test by the manufacturer of machine and as approved by Structural Consultant. Equipment shall be able to record force and velocity by using strain and acceleration sensor. **Test load shall be 2.5 x designed load.** The hammer weight shall be minimum 1% of test load as recommended. Test report shall include ➢ Force velocity curve ➢ Pile capacity ➢ Shaft Friction ➢ End bearing ➢ Stimulated static load test curve ➢ Net and total pile displacement ➢ Pile integrity				-

BILLS OF QUANTITIES Date :17;06;24

DRAFT

SR. NO.	PARTICULARS	UNIT	RATE	QUANTITY	AMOUNT
	Test shall be carried out minimum 14 days after installation of pile. Report shall be submitted within 7 days of testing.				
	i) 750mm dia with load carrying capacity 300 MT.	Nos.	15/000	1	250000
1.9	Providing, conducting and submitted documented report on **RCC bored pile** integrity **test** using pile integrity tester on completion of required setting of piles, preparation of heads, mobilising and demobilising of equipments all complete. Report should include graphical wave form, interpretation of results, cross sectional or material changes if any in. length of pile, concrete quantity etc. all complete on forming to ASTMD5882 and to satisfaction of the PM.				
	i) 750mm dia with load carrying capacity 300 MT.	Nos.	1200	317	380400

M/s PALOMA REALTY L&P, KANPUR, Project : PALOMA THE GRANDEUR — PILING WORK

BILLS OF QUANTITIES — Date :17;06;24

DRAFT

SR. NO.	PARTICULARS	UNIT	RATE	QUANTITY	AMOUNT
1.10	Chipping and dressing of the R.C.C. piles upto length of 600mm including cleaning reinforcement and removal of dismantled materials upto a distance of 50 meter beyond the building area etc. for providing pile caps. Spec :complete as approved by PM I) 750mm dia with load carrying capacity 300 MT.	Nos	4000	317	1268000
	SUB TOTAL OF PILING WORK				113502775
	Add GST				
	TOTAL OF PILING WORK				11,35,02,775.00
	(RUPEES : Eleven Crore Thirty Five Lakh Two Thousand Seven Hundrad Seventy Five Rupees Only)				

Note Company will provide only water supply free of cost at one single point. Maintenance and repairing will be in your scope
Electric supply on chargeable basis and it will be provided at one single point.
Space for Site, Office , Store, Labour Hutment only in plot area.
Nothing else will be supplied by the company
Quantity is tentative actual quantity as per site.

MEASUREMENT OF BUILDING AND CIVIL ENGINEERING WORKS

PART 23 PILING

(Fourth Revision)

Second Reprint DECEMBER 1996

UDC 69.003.12:624.155

BUREAU OF INDIAN STANDARDS
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG

METHOD OF MEASUREMENT OF BUILDING AND CIVIL ENGINEERING WORKS

PART 23 PILING

(Fourth Revision)

0. FOREWORD

0.1 This Indian Standard (Part 23) (Fourth Revision) was adopted by the Bureau of Indian Standards on 16 November 1988, after the draft finalized by the Method of Measurement of Works of Civil Engineering (Excluding River Valley Projects) Sectional Committee had been approved by the Civil Engineering Division Council.

0.2 Measurement occupies a very important place in the planning and execution of any civil engineering work from the time of first estimates to the final completion and settlement of payments of project. Methods followed for measurement are not uniform and considerable differences exist between practices followed by different construction agencies and also between various Central and State Government Departments. While it is recognized that each system of measurement has to be specifically related to administrative and financial organizations within a department responsible for the work, a unification of the various systems at technical level has been accepted as very desirable specially as it permits a wider range of operation for civil engineering contractors and eliminates ambiguities and misunderstandings arising out of inadequate understanding of the various systems followed.

0.3 Since different trades are not related to one another, the Sectional Committee during its second revision decided that each trade as given in IS : 1200-1964* shall be issued separately as a different part as it would be helpful to users in using the specific standard. This part covers the method of measurement of piling work applicable to buildings as well as to civil engineering works was published separately in the year 1971 and further revised in 1977. In view of the large number of comments received on this part, the Sectional Committee decided to issue a fourth revision incorporating the changes to keep the latest method as being followed by most of the organizations. The principal modifications are in respect of reinforced cement concrete sheet, timber sheet, and bored piles.

0.4 For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a measurement, shall be rounded off in accordance with IS : 2-1960†. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

*Method of measurement of building and civil engineering works *(first revision)*.

†Rules for rounding off numerical values *(revised)*.

1. SCOPE

1.1 This standard (Part 23) covers the method of measurement of piling.

2. GENERAL RULES

2.1 Clubbing of Items — Items may be clubbed together and that the break-up of the clubbed items is agreed to be on the basis of detailed description of the items stated in this standard.

2.2 Dimensions shall be taken generally in the sequence of length, width and height or depth of thickness.

2.3 Description of Items — The description of each item shall unless otherwise stated, be held to include where necessary, conveyance and delivery, handling, unloading, storing, fabrication, hoisting, all labour for finishing to required shape and size, setting, fitting and fixing in position, straight cutting and waste, return of packings, etc.

b) Areas shall be worked out to the nearest 0·01 m^2, and

c) Cubic contents shall be worked to the nearest 0·01 m^3.

2.5 Work to be Measured Separately — The situations, such as, in/under water, liquid mud, marshy land, tidal condition, etc, in which work is to be executed shall be stated.

2.5.1 The level of high and low water tides where occurring, shall be stated.

2.6 Bills of Quantities — The bills of quantities shall fully describe the materials and workmanship, and accurately represent the work to be executed.

2.7 A general description of the nature of site shall be stated.

2.8 The available information as to the strata through which the piles are to be driven shall be stated or reference showing records of bores be given.

2.9 If piles are to be provided from any level other than the ground level, it shall be stated. If the piling frame is to be lowered or raised, the exact height and nature of working shall be described, separate items shall be provided for driving raker/in groups/isolated/lengthened/ trial piles.

2.10 Items shall include any extra excavation filling and/or ramming required at the time of construction for the movement of piling frame for executing piling work.

2.11 Bringing plant to the site and erecting it and dismantling and taking it back, shall be measured separately as lump sum items.

NOTE — Shifting of plant at site of work shall be included in the item of piles.

2.12 If load testing is to be done, the provision for such test shall be specified and measured separately.

3. METHOD OF MEASUREMENT OF PRECAST REINFORCED CONCRETE PILES

3.1 The precast reinforced concrete piles shall be described according to the grade of concrete, section and length, the extra strength of the heads being stated. Any requisite mould shall

pile to the tip of shoes.

3.3 No deduction shall be made for chamfers, tapered points or the volume of reinforcement or holes for lifting piles.

3.4 The formwork, links and sleeves shall be included in the description of the item.

3.5 The reinforcement shall be measured separately [*see* IS : 1200 (Part 8)-1975*].

3.6 The shoes for each size shall be enumerated separately, stating the approximate weight.

3.7 Driving piles to a given level and redriving of lengthened piles shall be measured in running metres, separate measurements being made for piles of 5 m length and less and subsequently for every 1 m length range. The driving of piles shall be measured from the tip of the shoes up to the level as shown in the drawings. The raker piles shall be measured along the axis of the pile.

3.8 The measurement of handling, transportation and pitching of piles shall be enumerated for each occasion.

3.9 For stripping the heads of the piles, the length to be stripped shall be stated and measured per linear metre.

3.10 Stripping off the head of the piles for bond length shall be enumerated.

3.11 When concrete piles are lengthened in position, after they have been lowered, the cement concrete when used for lengthening shall be measured as a separate item. This item shall include the extra labour involved in stripping the exposed end to form connection of new with old work and any excavation, if required.

4. METHOD OF MEASUREMENT OF TIMBER PILES

4.1 Timber piles shall be described and measured in running metre stating the species of timber [*see* IS : 2911 (Part 2)-1980†] and size of the pile. If over 5·0 m in length, the length extra over 5 m shall be measured in stages of one metre.

*Method of measurement of building and civil engineering works: Part 8 Steel-work and ironwork (*third revision*).

ting above or below those shown in drawings shall be specified.

4.1.2 Shaping and shoeing of pile shall be enumerated, stating the approximate weight of the shoe and size of the pile.

4.2 Handling, transportation and pitching of piles shall be enumerated for each occasion.

4.3 Driving timber piles shall be measured from the tip of the shoe to the ground level as shown in the drawings or as found at site at the time of driving. The method of measurement of driving pile shall be the same as given in **3.7**. This item shall also include cutting the top of the pile and dressing it for fixing mild steel ring against splitting during driving.

4.4 The supply and fixing of iron rings to the pile head before driving and also the labour involved in cutting off the ringed portion or any portion damaged in driving shall be included in the description of the item.

4.5 Joints in piles shall be described and enumerated.

5. METHOD OF MEASUREMENT OF STEEL SHEET PILES (PERMANENT)

5.1 Supply only of sheet piles shall be measured by weight [*see* IS : 1200 (Part 8)-1975*]. The description of the item shall include the cross-sectional shape, nomenclature of manufacture, specification of material, details of fabrication, such as, lengthening by means of welding; riveting, drilling or burning holes, joining or fixing of structural rolled steel sections, handling and transportation to the site, etc. Piles exceeding 12 m in length shall be described separately stating the lengths in further stages of 3 m.

5.2 All struts, anchor bolts, anchor plates, turn buckles, waling, etc, shall be measured separately in accordance with IS : 1200 (Part 8)-1975*.

5.3 When sheet piles are to be painted prior to driving, such painting shall be measured in square metres obtained by multiplying the length by the perimeter of the fabricated sheet pile measured along the profile. Description of the item shall include the method of preparation of surface, number of coats, mode of painting and the like.

obtained by multiplying the length of the embedded portion of the pile in soil and half of the perimeter as defined in IS : 2314-1986*. The length of the embedded portion shall be obtained by measuring from the level of the ground where the tip of the sheet pile first touches before driving, to the ultimate level of the tip of the piles after driving.

5.5 Wherever sheet piles are to be driven under/in water necessitating the use of special hammers and/or loader frames, such piles shall be described and measured separately.

5.6 Driving corner piles and junction piles shall be measured in running metres representing the length of embedment.

5.7 Cutting or burning through steel piles shall be measured in running metres as extra over the pile. The disposal of cut length shall be described.

5.8 Extraction of piles other than those described in **5.6** shall be measured separately in square metres obtained by multiplying the embedded length in soil by the nominal width of piles from the centre of the clutches. Operations such as lifting, handling and removing from the site shall be described and included in the item.

6. METHOD OF MEASUREMENT OF CAST *IN SITU* DRIVEN CONCRETE PILES

6.1 The description of the pile shall state the nominal diameter, grade of concrete, size of aggregate reinforcing bars, length of the cage and the pile.

6.2 Forming pile shafts including concrete, and driving casings to a given level shall be measured as one item in running metres.

6.3 Reinforcement including bars to be left in the pile cap for embedding shall be measured separately [*see* IS : 1200 (Part 8)-1975†].

6.4 The length of the cast *in situ* piles shall be measured from the toe of the pile to the pile cut off level. The description of the pile shall state the diameter and the type of casing, the grade of concrete, and details of reinforcement of the core.

6.5 The provision of pile shoes shall be included in the item.

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*Method of measurement of building and civil

*Specification for steel sheet pilling sections (*first revision*).

†Method of measurement of building and civil

7. METHOD OF MEASUREMENT OF *CAST IN SITU* BORED REINFORCED CONCRETE PILES

7.1 Empty boring shall be measured separately in running metres and the length shall be from working level to the cut off level of the pile. The type of filling shall be stated.

7.2 The boring through boulders and rock strata shall be measured extra over.

7.3 Reinforcement in pile including bars to be left in the pile cap for embedment shall be measured separately.

7.4 The description of the pile shall state the nominal diameter, grade of concrete, size of aggregate, the reinforcing bars, the length of cage, and the provision of liners, if any.

7.5 Permanent mild steel liners, if provided, shall be measured separately in weight in accordance with IS : 1200 (Part 8)-1975* from working level to foundation level.

7.6 In case of under-reamed or bulb based piles, the bulbs shall be measured and enumerated. The description of piles shall state the diameter of the bulb.

8. METHOD OF MEASUREMENT OF REINFORCED CEMENT CONCRETE SHEET PILES

8.1 The reinforced cement concrete sheet piles shall be measured in cubic metres arrived at by multiplying the cross-sectional area of the pile by the length of the pile as cast from the head of the pile to the tip of the shoes.

8.2 The description of the item shall include the cross-sectional shape, grade of concrete, size of aggregate and extra strength of the head. Any requisite mould shall be included in the description as also necessary strapping, bolts and lifting holes.

8.3 Lifting, handling, pitching engaging through adjacent piles and driving shall be measured separately for each type in square metres obtained by multiplying the length of the embedded portion of the pile and half the parameter of the section. The length of the embeded portion shall be obtained by measuring from the level of the ground where the tip of the pile first under/in water necessitating the use of special hammers and/or loader frames, such piles shall be described by measuring separately.

8.5 Driving corner piles and junction piles shall be measured separately.

8.6 Cutting piles shall be measured in running metres as extra over. The disposal of cut length shall be described.

8.7 The extraction of piles other than due to defective driving shall be measured separately in square metres as mentioned in **8.3.**

9. METHOD OF MEASUREMENT OF TIMBER SHEET PILES

9.1 The timber sheet piles shall be described and measured in running metres stating the species of timber and cross-section.

9.2 Handling, transportation and pitching of piles shall be enumerated for each occasion.

9.3 Driving timber sheet piles shall be measured in square metres obtained by multiplying the length of the embedded portion of the pile in soil and half the perimeter of the construction.

9.4 Whenever sheet piles are to be driven under/in water necessitating the use of special hammers and/or loader frames, such piles shall be described and measured separately.

9.5 The corner and junction piles shall be measured separately.

9.6 Cutting pile shall be measured in running metres as extra over. The disposal of cut length shall be described.

9.7 The extraction of piles other than due to defective driving shall be measured separately as in **9.3.**

10. METHOD OF MEASUREMENT OF BORED PRECAST CONCRETE PILES

10.1 The precast reinforced concrete bored piles shall be described according to grade of concrete, and size of aggregate section and length, the extra strength of the heads being stated. Any requisite mould shall be included in the description as also the necessary strapping, bolts and lifting holes.

10.2 The cement concrete shall be measured separately in cubic metres arrived at by multiplying the cross-sectional area of the pile by the

*Method of measurement of building and civil

included in the description of the item.

10.4 The reinforcement shall be measured separately [*see* IS : 1200 (Part 8)-1975*].

10.5 Placing pile shaft shall be measured in running metres from founding level to working level of the pile.

10.6 Empty boring shall be measured separately in running metres and the length shall be from

10.7 The measurement of handling, transportation and pitching of piles shall be enumerated for each occasion.

10.8 For strapping the heads of the pile, the length to be stripped shall be stated and measured in running metres.

10.9 Stripping off the heads of the pile for bond length shall be enumerated.

10.10 Grouting shall be measured in cubic metres describing fully the type of method.

*Method of measurement of building and civil engineering works: Part 8 Steelwork and ironwork (*third revision*).

Ref: Quo/45/24-25/R-1 Date: 19-06-2024

To
M/s PALOMA REALTY LLP.
60/52, Nayaganj, Kanpur

Kind Attn: Sh. Gopal Verma

Subject: Submission of Quotation Documents for Proposed Highrise Commercial Building at Laxman Bagh Kanpur. Concrete Pile work.

Dear Sir

This is with reference to your mail regarding the above-mentioned project. We have pleasure in submitting our offer for the same as per attached BOQ.

We appreciate the opportunity to submit this proposal and look forward to performing this work for you. We hope you shall find our proposal as competitive and favour us with your work order. Please contact us when we can be of further service to you.

Thanking you and assuring you of our best services in all times.

Yours faithfully,

For BHOOMI GEOTECH PVT. LTD.

Kaushal Kumar
Director

BILLS OF QUANTITIES { Piling working Plateform is 3.0 meter to 8 mtr below basement 3 Basement is approximate 15 mtr below from Ground Level

M/s PALOMA REALTY LLP , KANPUR , Project : PALOMA THE GRANDEUR — *PILING WORK*

BILLS OF QUANTITIES — *Date :17:06:24*

DRAFT

SR. NO.	*PARTICULARS*	*UNIT*	*RATE*	*QUANTITY*	*AMOUNT*
1.0	**PILING WORK**				
1.1	**Mobilisation and Demobilisation of work site** with all necessary plants, equipments, piling rigs, necessary personnel and erecting them etc. complete and on completion of piling work demobilising site with all the plants, equipments, piling rigs, necessary personnel brought to site including cleaning and reinstating site to original condition acceptable to the PM.	Lumpsum	*500000*	1 Job	*5,00,000.00*
1.2	Providing and constructing **cast in situ bored Piles using rotary drilling rigs.** Scope includes drilling through all type of strata up to founding level accordance with the Structural drawing, including setting out cardinal points, boring in over burden through all stratas including soft rock, dewatering including socketing in rock, placing and withdrawal of steel casing upto non colapsible strata or as instructed wherever required, disposal of bored material outside the site at approved location by PM as per their rules & regulation, irrespective of lead as directed, lowering the reinforcement cage, welding of new bars of specified dia with stitch weld and/or lap weld as per specification. **(Working platform for piling work 3.0mt to 8.0 mtr below Basement 03)**				
	i) 750mm dia. Pile (300 MT) length 30mtr	Rmt	*1200*	9856	1,18,27,200.00
					-
1.3	Providing, machine mixing **designed mix / ready mix M35 grade reinforced cement concrete (RCC)**, using 20mm nominal size well-graded approved quality aggregate and sand as per approved design mix as per IS code and with minimum cement content **400 Kg per Cum** as specified by Structural consultant maximum water cement ratio 0.42 including using approved admixtures, . **(Concreting of piles to be carried out for 600mm above the cutoff level which will not be paid, being contaminated concrete) Make of Cement is Ultratech**	Rmt	*2650*	9856	2,61,18,400.00

	Laying ; machine mixing designed mix / ready mix **M35 grade reinforced cement concrete (RCC),** using 20mm nominal size well-graded approved quality aggregate **and** sand as per approved design mix as per IS code and with minimum cement content **400 Kg per Cum** as specified by Structural consultant maximum water cement ratio 0.42 including using approved admixtures, vibrating / compacting, curing, scaffolding, cleaning, preparing surfaces, junctions, hacking closely surfaces to be plastered etc. complete but excluding the cost of Formwork and reinforcement to the entire satisfaction of the PM at all depths, heights, lifts and leads. **(Concreting of piles to be carried out for 600mm above the cutoff level which will not be paid, being contaminated concrete) Make of Cement is Ultratech**				
	i) 750mm dia. Pile (300 MT) depth 30 Mtr	Rmt	*400*	9856	39,42,400.00
1.5	**Empty Boring** measured from the working platform level to the cut-off levels of the piles. Further it shall be filled with approved dry sand. (Working platform level is considered as -14.75m level)	Rmt	*1200*	1129	13,54,800.00
1.6	Providing **steel reinforcement for RCC**, at site				
	High yield strength deformed bars conforming to IS 1786 - Fe 550 grade Make : TATA	KG	*62*	297309	1,84,33,158.00
1.6 A	Fixing **steel reinforcement for RCC**, including transporting, de-coiling, straightening, cutting, bending, and placing in position at all levels and binding with approved quality G.I. annealed binding wire of 18 gauge for end bearing cast-in-situ piles conforming to IS 2911, Part I with correct size PVC cover blocks or approved concrete cover blocks of same grade as of concrete. The rate shall include cost of binding wire, chairs, spacers, pins, welding which will not be measured separately for payment. Quantity of steel as per bar bending schedule as approved by the PM and with authorized overlaps only shall be measured and paid for. Further include where required carryout dewatering, provide required labour and machines / equipments / tools / tackles for handling, shifting, bending, binding,welding etc. all complete to the satisfaction of the PM at all depths & leads.	KG	*12*	297309	*35,67,708.00*
1.7	Carry out **load testing** of cast-in-situ reinforced cement concrete bored piles using Pile Driving Analyzer equipment conforming to ASTM D4945 - 1989 through authorized licenced agency to carry out test by the manufacturer of machine and as approved by Structural Consultant. Equipment shall be able to record force and velocity by using strain and acceleration sensor. **Test load shall be**				

	➢ Force velocity curve ➢ Pile capacity ➢ Shaft Friction ➢ End bearing ➢ Stimulated static load test curve ➢ Net and total pile displacement ➢ Pile integrity Test shall be carried out minimum 14 days after installation of pile. Report shall be submitted within 7 days of testing. i) 750mm dia with load carrying capacity 300 MT.	Nos.	*600000*	9	54,00,000.00
1.8	Carry out high **strain dynamic load testing** of cast-in-situ reinforced cement concrete bored piles using Pile Driving Analyzer equipment conforming to ASTM D4945 -1989 through authorized licenced agency to carry out test by the manufacturer of machine and as approved by Structural Consultant. Equipment shall be able to record force and velocity by using strain and acceleration sensor. **Test load shall be 2.5 x designed load.** The hammer weight shall be minimum 1% of test load as recommended. Test report shall include ➢ Force velocity curve ➢ Pile capacity ➢ Shaft Friction ➢ End bearing ➢ Stimulated static load test curve ➢ Net and total pile displacement ➢ Pile integrity Test shall be carried out minimum 14 days after installation of pile. Report shall be submitted within 7 days of testing. i) 750mm dia with load carrying capacity 300 MT.	Nos.	*150000*	1	1,50,000.00
1.9	Providing, conducting and submitted documented report on **RCC bored pile integrity test** using pile Integrity tester on completion of required setting of piles, preparation of heads, mobilising and demobilising of equipments all complete. Report should include graphical wave form, interpretation of results, cross sectional or material changes if any in, length of pile, concrete quantity etc. all complete on forming to ASTMD5882 and to satisfaction of the PM. i) 750mm dia with load carrying capacity 300 MT.	Nos.	*1000*	317	3,17,000.00
1.10	Chipping and dressing of the R.C.C. piles upto length of 600mm including cleaning reinforcement and removal of dismantled materials upto a distance of 50 meter beyond the building area etc. for providing pile caps.Spec :complete as approved by PM				

	SUB TOTAL OF PILING WORK				7,22,43,666.00
	Add GST @18%				**1,30,04,040.00**
	TOTAL OF PILING WORK				**8,52,48,706.00**

(RUPEES Eight Crore Fifty Two Lakh Forty Eight Thousand Six Hundred Seven Only)

Note : Company will provide only water supply free of cost at one single point.
Maintenanace and repairing will be in your scope
Electric supply on chargebale basis and it will be provided at one single point.
Space for Site, Office , Store, Labour Hutmen only in plot area.
Nothing else will be supplied by the company
Quantity is tentative actual quntity as per site.

Payment terms:

1. 5% of total contract value to be paid as advance for mobillzation of team & machinery.
2. 95% of total contact value shall be paid to us on completion of pile work on prorate basis.
3. Advance against undated cheque for procurement of TMT steel & RMC will be provided to us by developer.
4. GST will be charged extra over quoted rates.
5. We have not considered any PBC or retention amount in above rates.

Thanks & regards

For BHOOMI GEOTECH PVT. LTD.

Kaushal Kumar
Director

BILLS OF QUANTITIES (Piling working Plateform is 3.0 meter to 8 mtr below basement 3 Basement is approximately [illegible] mtr below from Ground Level

[illegible] REALITY LLP, KANPUR, [illegible] GRANS[illegible] — [illegible] WORK

BILLS OF QUANTITIES — Date : [illegible]/06/2[illegible]

DRAFT

SR. NO.	PARTICULARS	UNIT	RATE	QUANTITY	AMOUNT
1.0	PILING WORK				
1.1	**Mobilisation and Demobilisation of work site** with all necessary plants, equipments, piling rigs, necessary personnel and erecting them etc. complete and on completion of piling work demobilising site with all the plants, equipments, piling rigs, necessary personnel brought to site including cleaning and restoring the site to original condition acceptable to the PM.	Lumpsum	[illegible]		[illegible]
1.2	**Providing and constructing cast** in situ bored piles by using rotary drilling rigs. Scope includes drilling through all type of strata up to founding level as required with the **Structural drawing**, including setting out cardinal points, boring in as sandwich through **all stratas including soft rock**, dewatering, including socketing in rock, placing and withdrawal of steel casing upto non collapsible strata or as instructed wherever required. **disposal** of bored material outside the site at approved location by PM as per their rules & regulation, irrespective of lead as directed, lowering the reinforcement cage, welding of new bars of specified dia with [illegible] weld and/or lap weld as per specification. (**Working platform for piling** work [illegible] to 8.0 mtr below Basement (3)				
	i) 750mm dia. Pile (300 MT) [illegible] 30mtr	[illegible]	1575	[illegible]	[illegible]
1.3	**Providing**, machine mixing and laying designed mix / ready mix **M35 grade reinforced** cement concrete (RCC), using 20mm nominal size well-graded approved quality aggregate and sand as per approved design mix as per IS code and with minimum cement content **400 Kg per Cum** as specified by Structural consultant, maximum water cement ratio 0.42 including using approved admixtures, (Concreting of piles to be carried out for **600mm above the cut off level** which will not be paid, being contaminated concrete) **Make of Cement is Ultratech**	Rmt	7050	9856	
	i) 750mm dia. Pile (300 MT) depth 30 Mtr				
1.4	Laying, machine mixing and laying designed mix / ready mix M35 grade reinforced **cement concrete (RCC)**, using 20mm nominal size well-graded approved quality aggregate **and sand as per approved** design mix as per IS code and with minimum cement content **400 Kg per Cum** as specified by Structural consultant maximum water cement **ratio 0.42** including using approved admixtures, vibrating / compacting, curing, finishing, cleaning, preparing surfaces, **junctions, hacking** closely surfaces to be prepared etc. complete but excluding the **cost of formwork and reinforcement to the** entire satisfaction of the PM at all depths, heights, lifts and leads. (Concreting of piles **to be carried out** for 600mm above the cut off level which will not be paid, being **contaminated** concrete) Make of **Cement** is Ultratech				
	i) 750mm dia. Pile (300 MT) depth 30 Mtr	Rmt	100	9856	985600
1.5	**Empty** boring measured from the working platform level to the cut off levels of the piles. Empty bore shall be filled **with approved dry sand**. (Working platform level is considered as -14.75mtr.)	Rmt	1350	1129	1524150
1.6	Providing steel reinforcement **for RCC, piles**				

For BAJIYA [illegible] COMPANY

M/s PA[illegible]A REALTY[illegible] KANPUR . Project : PALOMA THE G[illegible]SOR [redacted] PILING WORK

BILLS OF QUANTITIES Date :17,08,24

DRAWI

SR. NO.	PARTICULARS	UNIT	RATE	QUANTITY	AMOUNT
	High yield strength deformed bars conf[illegible] IS [illegible] grade **Make : TATA**	KG	80	297369.	23784720
1.6 A	Fixing steel reinforcement for RCC, Including transporting, de-coiling, straightening, cutting, bending, and placing in position at all levels and binding with approved quality G.I. annealed binding wire of 18 gauge for end bearing cast-in-situ piles conforming to IS 2911, Part I with correct size PVC cover blocks or approved concrete cover blocks of same grade as of concrete. The rate shall include cost of binding wire, chairs, spacers, pins, welding which will not be measured separately for payment. Quantity of steel as per bar bending schedule as approved by the PM and with authorized overlaps only shall be measured and paid for. Further include where required carryout dewatering, provide required labour and machines / equipments / tools / tackles for handling, shifting, bending, [illegible] etc. all complete to the satisfaction of the PM at all depths & leads.	KG	6.5	297369	
1.7	Carry out load testing of cast-in-situ reinforced cement concrete bored piles using Pile Driving Analyzer equipment conforming to ASTM D4945 -1989 through authorized licensed agency to carry out test by the manufacturer of machine and as approved by Structural Consultant. Equipment shall be able to record force and velocity by using strain and acceleration sensor. Test load shall be 1.8 times designed load. The hammer weight shall be minimum 1% of test load as recommended. Test report shall include ➢ Force velocity curve ➢ Pile capacity ➢ Shaft Friction ➢ End bearing ➢ Simulated static load test curve ➢ Net and total pile displacement ➢ Pile integrity Test shall be carried out minimum 14 days after installation of pile. Report shall be submitted within 7 days of testing. i) 750mm dia with load carrying capacity 350 MT.	Nos.	350000	3	1[illegible]5000
1.8	Carry out high strain dynamic load testing of cast-in-situ reinforced cement concrete bored piles using Pile Driving Analyzer equipment conforming to ASTM D4945 -1989 through authorized licensed agency to carry out test by the manufacturer of machine and as approved by Structural Consultant. Equipment shall be able to record force and velocity by using strain and acceleration sensor. Test load shall be 2.5 x designed load. The hammer weight shall be minimum 1% of test load as recommended. Test report shall include ➢ Force velocity curve ➢ Pile capacity ➢ Shaft Friction ➢ End bearing ➢ Simulated static load test curve ➢ Net and total pile displacement ➢ Pile integrity Test shall be carried out minimum 14 days after installation of pile. Report shall be submitted within 7 days of testing. i) 750 mm dia with load carrying capacity 350 MT.	Nos	350000	1	350000

For BA[illegible]A PILING COMPANY

M/S SIGMA REALTY LLP, KANPUR, Project : SIGMA THE GRANDEUR — PILING WORK

BILLS OF QUANTITIES — Date :17/03/17

DRAFT

BILL NO.	PARTICULARS	UNIT	RATE	QUANTITY	AMOUNT
1.0	Providing, conducting and submitted Computerized report on RCC bored pile integrity test using pile integrity tester on completion of required setting of piles, preparation of heads, mobilising and demobilising of equipments all complete. Report should include graphical wave form interpolation of results, cross sectional of material dumpes if any in, length of pile, concrete quantity etc. all complete on forming to ASTM D5882 and to satisfaction of the PM. i) 750mm dia with load carrying capacity 300 MT.	Nos.	450	317	142650

For BAJIYA PILING COMPANY

Proprietor

[illegible] PALOMA [illegible] KANHER [illegible] PALOMA THE GRANDEUR — PILING WORK

BILLS OF QUA[illegible] — Date :17.08.24

DRAFT

SR. NO.	DESCRIPTION OF WORKS	UNIT	RATE	QUANTITY	AMOUNT
1.10	Chipping and dressing of the R.C.C. piles upto length of 500mm including cleaning reinforcement and removal of dismantled materials upto a distance of 50 meter beyond the shifting area etc. for providing pile caps. Spot Complete as approved by PM i) 750mm dia with load carrying capacity 500 M.T.	Nos.	38000	317	12046000
	SUB TOTAL OF PILING WORK				53970320
	Add GST				
	TOTAL OF PILING WORK				6,04,70,320.00

(RUPEES _____)

Note: Company will provide only water supply free of cost at one single point. Maintenance and repairing will be in your scope.
Electric supply on chargeable basis and it will be provided at one single point.
Space for Site, Office , Store, Labour Hutt only in plot area.
Nothing else will be supplied by the company
Quantity is tentative actual quantity as per site.

For BAJIYA PILING COMPANY

Proprietor

Ref: Quo/45/24-25 Date: 11-06-2024

To
M/s PALOMA REALTY LLP.
60/52, Nayaganj, Kanpur

Kind Attn: Sh. Gopal Verma

Subject: Submission of Quotation Documents for Proposed Highrise Commercial Building at Laxman Bagh Kanpur. **Concrete Pile work.**

Dear Sir

This is with reference to your mail regarding the above-mentioned project. We have pleasure in submitting our offer for the same as per attached BOQ.

We appreciate the opportunity to submit this proposal and look forward to performing this work for you. We hope you shall find our proposal as competitive and favour us with your work order. Please contact us when we can be of further service to you.

Thanking you and assuring you of our best services in all times.

Yours faithfully,

For **BHOOMI GEOTECH PVT. LTD.**

Kaushal Kumar
Director

M/s PALOMA REALTY LLP , KANPUR , Project : PALOMA THE GRANDEUR — *PILING WORK*

BILLS OF QUANTITIES

DRAFT

SR. NO.	*PARTICULARS*	*UNIT*	*RATE*	*QUANTITY*	*AMOUNT*
1.0	**PILING WORK**				
1.1	**Mobilisation and Demobilisation of work site** with all necessary plants, equipments, piling rigs, necessary personnel and erecting them etc. complete and on completion of piling work demobilising site with all the plants, equipments, piling rigs, necessary personnel brought to site including cleaning and reinstating site to original condition acceptable to the PM.	Lumpsum	*5,00,000.00*	1 job	*5,00,000.00*
1.2	Providing and constructing **cast in situ bored Piles using rotary drilling rigs.** Scope includes drilling through all type of strata up to founding level accordance with the Structural drawing. including setting out cardinal points, boring in over burden through all stratas including soft rock, dewatering including socketing in rock, placing and withdrawal of steel casing upto non colapsible strata or as instructed wherever required, disposal of bored material outside the site at approved location by local authority as per their rules & regulation, irrespective of lead as directed, lowering the reinforcement cage, welding of new bars of specified dia with stitch weld and/or lap weld as per specification. (Working platform for piling work 3.0mt below Basement 03) NOTE : THE CUT OFF LEVEL OF PILES IS (-17700mm w.r.t FFL) IN GENERAL AREA & (-19800 w.r.t FFL) IN LIFT AREA. i) 750mm dia. Pile (300 MT)	Rmt	*1,200.00*	9856	1,18,27,200.00
1.4	Providing, machine mixing and laying **designed mix / ready mix M35 grade reinforced cement concrete (RCC),** using 20mm nominal size well-graded approved quality aggregate and sand as per approved design mix as per IS code and with minimum cement content **400 Kg per Cum** as specified by Structural consultant maximum water cement ratio 0.42 including using approved admixtures, vibrating / compacting, curing, scaffolding, cleaning, preparing surfaces, junctions, hacking closely surfaces to be plastered etc. complete but excluding the cost of Formwork and reinforcement to the entire				

	concrete) **Make of Cement is Ultratech** i) 750mm dia. Pile (300 MT)	Rmt	*3,000.00*	9856	2,95,68,000.00
1.5	**Empty Boring** measured from the working platform level to the cut-off levels of the piles. Further it shall be filled with approved dry sand. (Working platform level is considered as -14.75m level)	Rmt	*1,200.00*	1129	13,54,800.00
1.6	Providing and fixing **steel reinforcement for RCC**, including transporting, de-coiling, straightening, cutting, bending, and placing in position at all levels and binding with approved quality G.I. annealed binding wire of 18 gauge for end bearing cast-in-situ piles conforming to IS 2911, Part I with correct size PVC cover blocks or approved concrete cover blocks of same grade as of concrete. The rate shall include cost of binding wire, chairs, spacers, pins, which will not be measured separately for payment. Quantity of steel as per bar bending schedule as approved by the PM and with authorized overlaps only shall be measured and paid for. Further include where required carryout dewatering, provide required labour and machines / equipments / tools / tackles for handling, shifting, bending, binding, etc. all complete to the satisfaction of the PM at all depths & leads. **High yield strength deformed bars conforming to IS 1786 - Fe 500 grade Make : TATA/SAIL/JINDAL**	KG	*75.00*	297309	2,22,98,175.00
1.7	Carry out **load testing** of cast-in-situ reinforced cement concrete bored piles using Pile Driving Analyzer equipment conforming to ASTM D4945 -1989 through authorized licenced agency to carry out test by the manufacturer of machine and as approved by Structural Consultant. Equipment shall be able to record force and velocity by using strain and acceleration sensor. **Test load shall be designed load.** The hammer weight shall be minimum 1% of test load as recommended. Test report shall include ➢ Force velocity curve ➢ Pile capacity ➢ Shaft Friction ➢ End bearing ➢ Stimulated static load test curve ➢ Net and total pile displacement ➢ Pile integrity Test shall be carried out minimum 14 days after installation of pile. Report shall be				

1.8	Carry out high **strain dynamic load testing** of cast-in-situ reinforced cement concrete bored piles using Pile Driving Analyzer equipment conforming to ASTM D4945 -1989 through authorized licenced agency to carry out test by the manufacturer of machine and as approved by Structural Consultant. Equipment shall be able to record force and velocity by using strain and acceleration sensor. **Test load shall be 2.5 x designed load.** The hammer weight shall be minimum 1% of test load as recommended. Test report shall include ➢ Force velocity curve ➢ Pile capacity ➢ Shaft Friction ➢ End bearing ➢ Stimulated static load test curve ➢ Net and total pile displacement ➢ Pile Integrity Test shall be carried out minimum 14 days after installation of pile. Report shall be submitted within 7 days of testing. i) 750mm dia with load carrying capacity 300 MT.	Nos.	*1,50,000.00*	1	1,50,000.00
1.9	Providing, conducting and submitted documented report on **RCC bored pile integrity test** using pile integrity tester on completion of required setting of piles, preparation of heads, mobilising and demobilising of equipments all complete. Report should include graphical wave form, interpretation of results, cross sectional or material changes if any in, length of pile, concrete quantity etc. all complete on forming to ASTMD5882 and to satisfaction of the PM. i) 750mm dia with load carrying capacity 300 MT.	Nos.	*1,000.00*	317	3,17,000.00
1.10	Chipping and dressing of the R.C.C. piles upto length of 600mm including cleaning reinforcement and removal of dismantled materials upto a distance of 50 meter beyond the building area etc. for providing pile caps.Spec :complete as approved by PM I) 750mm dia with load carrying capacity 300 MT.	Nos.	*2,000.00*	317	6,34,000.00
	SUB TOTAL OF PILING WORK				*7,20,49,175.00*
	Add GST @ 18%				**1,29,68,852.00**
	TOTAL OF PILING WORK				**8,50,18,027.00**

(RUPEES Eight Crore Fifty Lakh Eighteen Thousand Twenty Seven Only)

Note : Company will provide only water supply free of cost at one single point.
Electric supply on chargebale basis and it will be provided at one single point.
Space for Site, Office , Store, Labour Hutmen only in plot area.
Nothing else will be supplied by the company
Quantity is tentative actual quntity as per site.

Payment terms:

1. 5% of total contract value to be paid as advance for mobilization of team & machinery.
2. 95% of total contact value shall be paid to us on completion of pile work on prorate basis.
3. Advance against undated cheque for procurement of TMT steel & RMC will be provided to us by developer.
4. GST will be charged extra over quoted rates.
5. We have not considered any PBC or retention amount in above rates.

Thanks & regards

For **BHOOMI GEOTECH PVT. LTD.**

Kaushal Kumar
Director

BILLS OF QUANTITIES

BILLS OF QUANTITIES

T O.	*PARTICULARS*	*UNIT*	*RATE*	*QUANTITY*	*AMOUN*
	PILING WORK				
	Mobilisation and Demobilisation of work site with all necessary plants, equipments, piling rigs, necessary personnel and erecting them etc. complete and on completion of piling work demobilising site with all the plants, equipments, piling rigs, necessary personnel brought to site including cleaning and reinstating site to original condition acceptable to the PM.	Lumpsum	*500000*		*500000*
	Providing and constructing **cast in situ bored Piles using rotary drilling rigs.** Scope includes drilling through all type of strata up to founding level accordance with the Structural drawing, including setting out cardinal points, boring in over burden through all stratas including soft rock, dewatering including socketing in rock, placing and withdrawal of steel casing upto non colapsible strata or as instructed wherever required, disposal of bored material outside the site at approved location by local authority as per their rules & regulation, irrespective of lead as directed, lowering the reinforcement cage, welding of new bars of specified dia with stitch weld and/or lap weld as per specification. (Working platform for piling work 3.0mt below Basement 03)				
	NOTE : THE CUT OFF LEVEL OF PILES IS (-17700mm w.r.t FFL) IN GENERAL AREA & (-19800 w.r.t FFL) IN LIFT AREA.				
	i) 750mm dia. Pile (300 MT)	Rmt	*1800*	9856	17740(
	Providing, machine mixing and laying **designed mix / ready mix M35 grade reinforced cement concrete (RCC),** using 20mm nominal size well-graded approved quality aggregate and sand as per approved design mix as per IS code and with minimum cement content **400 Kg per Cum** as specified by Structural consultant maximum water cement ratio 0.42 including using approved admixtures, vibrating / compacting, curing, scaffolding, cleaning, preparing surfaces, junctions, hacking closely surfaces to be plastered etc. complete but excluding the cost of Formwork and reinforcement to the entire satisfaction of the PM at all depths, heights, lifts and leads. (Concreting of piles to be carried out for 600mm above the cutoff level which will not be paid, being contaminated concrete) **Make of Cement is Ultratech**				

BILLS OF QUANTITIES

FT NO.	PARTICULARS	UNIT	RATE	QUANTITY	AMOU
	i) 750mm dia. Pile (300 MT)	Rmt	1800	9856	177408
5	**Empty Boring** measured from the working platform level to the cut-off levels of the piles. Further it shall be filled with approved dry sand. (Working platform level is considered as -14.75m level)	Rmt	1400	1129	158066
3	Providing and fixing **steel reinforcement for RCC**, including transporting, de-coiling, straightening, cutting, bending, and placing in position at all levels and binding with approved quality G.I. annealed binding wire of 18 gauge for end bearing cast-in-situ piles conforming to IS 2911, Part I with correct size PVC cover blocks or approved concrete cover blocks of same grade as of concrete. The rate shall include cost of binding wire, chairs, spacers, pins, which will not be measured separately for payment. Quantity of steel as per bar bending schedule as approved by the PM and with authorized overlaps only shall be measured and paid for. Further include where required carryout dewatering, provide required labour and machines / equipments / tools / tackles for handling, shifting, bending, binding, etc. all complete to the satisfaction of the PM at all depths & levels **High yield strength deformed bars conforming to IS 1786 - Fe 500 grade Make : TATA/SAIL/JINDAL**	KG	75	297309	222981
7	Carry out **load testing** of cast-in-situ reinforced cement concrete bored piles using Pile Driving Analyzer equipment conforming to ASTM D4945 -1989 through authorized licenced agency to carry out test by the manufacturer of machine and as approved by Structural Consultant. Equipment shall be able to record force and velocity by using strain and acceleration sensor. **Test load shall be designed load.** The hammer weight shall be minimum 1% of test load as recommended. Test report shall include ➢ Force velocity curve ➢ Pile capacity ➢ Shaft Friction ➢ End bearing ➢ Stimulated static load test curve ➢ Net and total pile displacement ➢ Pile integrity				

BILLS OF QUANTITIES

FT NO.	PARTICULARS	UNIT	RATE	QUANTITY	AMOU
	Test shall be carried out minimum 14 days after installation of pile. Report shall be submitted within 7 days of testing. i) 750mm dia with load carryIng capacity 300 MT.	Nos.	250000	9	225000
3	Carry out high **strain dynamic load testing** of cast-in-situ reinforced cement concrete bored piles using Pile Driving Analyzer equipment conforming to ASTM D4945 -1989 through authorized licenced agency to carry out test by the manufacturer of machine and as approved by Structural Consultant. Equipment shall be able to record force and velocity by using strain and acceleration sensor. **Test load shall be 2.5 x designed load.** The hammer weight shall be minimum 1% of test load as recommended. Test report shall include ➢ Force velocity curve ➢ Pile capacity ➢ Shaft Friction ➢ End bearing ➢ Stimulated static load test curve ➢ Net and total pile displacement ➢ Pile integrity Test shall be carried out minimum 14 days after installation of pile. Report shall be submitted within 7 days of testing. i) 750mm dia with load carrying capacity 300 MT.	Nos.	250000	1	25000
3	Providing, conducting and submitted documented report on **RCC bored pile integrity test** using pile integrity tester on completion of required setting of piles, preparation of heads, mobilising and demobilising of equipments all complete. Report should include graphical wave form, interpretation of results, cross sectional or material changes if any in, length of pile, concrete quantity etc. all complete on forming to ASTMD5882 and to satisfaction of the PM. i) 750mm dia with load carrying capacity 300 MT.	Nos.	1200	317	38040

ALOMA REALTY LLP , KANPUR , Project : PALOMA THE GRANDEUR *PILING WORK*

BILLS OF QUANTITIES

FT NO.	*PARTICULARS*	*UNIT*	*RATE*	*QUANTITY*	*AMOU*
0	Chipping and dressing of the R.C.C. piles upto length of 600mm including cleaning reinforcement and removal of dismantled materials upto a distance of 50 meter beyond the building area etc. for providing pile caps. Spec :complete as approved by PM i) 750mm dia with load carrying capacity 300 MT.	Nos.	*4000*	317	12680
	SUB TOTAL OF PILING WORK				*640087*
	Add GST				
	TOTAL OF PILING WORK				**6,40,08**

(RUPEES _____ **)**

Note : Company will provide only water supply free of cost at one single point.
Electric supply on chargebale basis and it will be provided at one single point.
Space for Site, Office , Store, Labour Hutmen only in plot area.
Nothing else will be supplied by the company
Quantity is tentative actual quntity as per site.

BILL OF QUANTITIES

PALOMA REALTY LLP, [illegible] PUR. Project: PALOMA THE [illegible] NOBLE — PILING WORK

BILL OF QUANTITIES

ITEM NO.	PARTICULARS	UNIT	RATE	QUANTITY	AMOUNT
1.0	PILING WORK				
1.1	Mobilisation and Demobilisation of work site with all necessary plants, equipments, piling rigs, necessary personnel and supervision thereof, complete and on completion of piling work demobilising site with all the [illegible] equipments, piling rigs, necessary personnel brought to site including clearing and restoring site to original condition acceptable to the PMC.	Lumpsum	[illegible]		[illegible]
1.2	Providing and constructing cast in situ bored Piles using rotary drilling rigs. Scope includes drilling through all type of strata up to founding level accordance with the Structural drawing, including setting out, control points, boring in over burden through all strata including soft rock, dewatering including [illegible] in rock, placing and withdrawal of steel casing [illegible] as instructed, wherever required, disposal of bored material outside the site at approved location by local authority as per their rules & regulation, irrespective of bored as directed, lowering the reinforcement cage, welding of [illegible] of specified dia with each weld and/or lap weld as per specification. (Working platform for piling work 3.0m below [illegible] ground 0.0)				
	NOTE : THE CUT OFF LEVEL OF PILES IS (-11.750mm w.r.t. FFL) OF GENERAL AREA & (-[illegible] w.r.t. FFL) IN [illegible] AREA.				
	i) 750mm dia. Pile (300 MT)	Rmt	[illegible]	[illegible]	[illegible]
1.4	Providing, machine mixing and laying in-ground with / ready mix M35 grade reinforced cement concrete (RCC), using [illegible] nominal size well graded approved quality aggregate and sand as per approved design mix as per IS code and with minimum cement content [illegible] Kg per Cum as specified by Structural consultant, maximum water cement ratio 0.42 including using tremie [illegible], including compacting, curing, protecting, cleaning [illegible] [illegible] surfaces to be plastered [illegible] of [illegible] reinforcement to the entire satisfaction of the PMC at all depths, heights, lifts and [illegible] (Concreting of piles to be [illegible] 600mm above the cut-off [illegible] which will not be paid being contaminated concrete) (Make of Cement: Ultratech)				
	i) 750mm dia. Pile (300 MT)	Rmt	7,304	9256	[illegible]
1.5	Empty Boring measured from the working platform level to the cut off levels of the piles. Further, it shall be filled with approved dry earth. Working platform level is considered as -14.75m level.	Rmt	[illegible]	[illegible]	[illegible]
1.6	Providing and fixing steel reinforcement for piles including transporting, de-coiling, straightening, cutting, bending and placing in position at all levels and binding with approved quality G.I. annealed binding wire of 18 gauge for and [illegible] cast-in-situ piles conforming to IS 2911, Part I with spacer and PVC cover blocks or approved concrete cover blocks of same grade as of concrete. The rate shall include cost of binding wire, chairs, spacers, pins, which will not be measured separately for payment. Quantity of steel as per bar bending schedule as approved by the PM and with authorized overlaps only shall be considered and paid for. Further include where required cement, dewatering, provide required labour and machinery / equipments / tools / tackles for handling, shifting, bending, binding, etc. all complete to the satisfaction of the PM at all depths & levels.				
	High yield strength deformed bars conforming to IS 1786 - Fe 500 grade Make: TATA/SAIL/JINDAL	KG	88	297308	[illegible]
1.7	Carry out load testing of cast in situ bored cement concrete piles using Pile Driving Analyzer equipment conforming to ASTM [illegible] through authorized licenced agency to carry out test by the [illegible] machine and approved by Structural Consultant. Equipment shall be able to record force and velocity by using strain and [illegible] the [illegible] shall be designed load. The hammer weight shall be minimum [illegible] of test load as recommended.				
	Test report shall include:				
	➢ Pile integrity result				
	➢ Pile capacity				
	➢ Shaft Friction				
	➢ End bearing				
	➢ Simulated static load test curve				
	➢ Net and total pile displacement				

For BAJIYA PILING COMPANY

BILLS OF QUANTITIES

ITEM SR. NO.	DESCRIPTION	UNIT	RATE	QUANTITY	AMOUNT
	➢ Pile integrity Test shall be carried out minimum 14 days after installation of pile. Report shall be submitted within 7 days of testing. i) 750mm dia with load carrying capacity 300 MT.	Nos.	55000	[illegible]	1,10,000
1.8	Carry out high strain dynamic load testing of cast in-situ reinforced cement concrete bored piles using Pile PDA equipment conforming to ASTM D4945-1089 through authorized licensed agency to carry out test by the manufacturer of machine and as approved by Structural Consultant. Equipment shall be able to record force and velocity by using strain and acceleration sensor. Test load shall be 2.5 x designed load. The hammer weight shall be minimum 1% of test load as recommended. Test report shall include: ➢ Force velocity curve ➢ Pile capacity ➢ Shaft Friction ➢ End bearing ➢ Simulated pile load test curve ➢ Set and total pile displacement ➢ Pile integrity Test shall be carried out minimum 14 days after installation of pile. Report shall be submitted within 7 days of testing. i) 750mm dia with load carrying capacity 300 MT.	Nos.	[illegible]	1	[illegible]
1.9	Providing, conducting and submitting documented report on RCC bored pile integrity test using pile integrity tester on completion of required setting of piles, preparation of heads, mobilising and demobilising of equipments all complete. Report should include graphical wave form, interpretation of results, cross sectional or material changes if any in length of pile, other discontinuity etc. all complete conforming to ASTM D5882 and to satisfaction of Engineer. i) 750mm dia with load carrying capacity 300 MT.	Nos.	[illegible]	317	1,42,650
1.10	Chipping and dressing of the R.C.C. piles upto length of 600mm including cleaning reinforcement and removal of dismantled materials upto a distance of 50 meter beyond the building area etc. for proper pile cap. Specs complete as approved by [illegible] i) 750mm dia with load carrying capacity 300 MT.	Nos.	[illegible]	317	9,5[illegible]
	SUB TOTAL OF PILING WORK				[illegible]
	Add GST				
	TOTAL OF PILING WORK				[illegible]
	(RUPEES:				

Note . Company will provide only water supply free of cost at one single point.
Electric supply on chargeable basis and it will be provided at one single point.
Space for Site, Office, Store, Labour Hutmen only in premises.
Nothing else will be supplied by the company.
Quantity is tentative actual quantity as per site.

For BAJIVA PILING COMPANY

Proprietor