

**MINISTRY OF HEALTH & FAMILY WELFARE,  
GOVT. OF INDIA, NEW DELHI**

**TENDER**

**FOR**

**Construction of Boundary Wall for Residential  
Complex (Balance Works) for AIIMS like  
Institution at Bhubaneswar under PMSSY.**

**VOLUME – V**

**BILL OF QUANTITIES**

**March' 2012**



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**Tender No. HSCC/PMSSY/BHUB/BW/2012**

**B.O.Q. -**

**Construction of Boundary Wall for Residential Complex (Balance Works) for AIIMS Like Institution at Bhubaneswar (Orissa) under PMSSY - Third Call**

<b>Item No</b>	<b>Description Of Item</b>	<b>Qty.</b>	<b>Unit</b>	<b>Rate (in Rs.) in Figures</b>	<b>Rate (In Rs.) in Words</b>	<b>Amount (in Rs.)</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
1.01	Earth work in excavation in foundation trenches or drains (not exceeding 1.5m in width or 10sqm. on plan) including dressing of sides and ramming of bottoms, lift up to 1.5m including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 50m.					
	a) All kinds of soil.	756.00	CuM.			
1.02	Supplying and filling in plinth and other areas with fine sand including, watering, ramming consolidating and dressing complete.	10.00	CuM.			
1.03	Filling available excavated earth (excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20cm in depth: consolidating earth deposited layer by ramming and watering, lead up to 50m and lift up to 1.5m.	756.00	CuM.			
1.04	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work upto plinth level.					
	a) 1:4:8 (1 cement :4 coarse sand: 8 graded stone aggregate 40mm nominal size)	51.00	CuM.			

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1	2	3	4	5	6	7
1.05	Providing and laying cement concrete in retaining walls, returns walls, walls (any thickness) including attached pilasters, column, piers, abutments, pillars, posts, struts, buttresses, string or lacing courses, parapets, coping, bed blocks, anchor blocks, plain window sills, fillet etc up to floor five level, excluding the cost of centering, shuttering and finishing:					
	a) 1:2:4 (1 Cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size)	180.00	CuM.			
1.06	Providing and laying damp-proof course 40mm thick with cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 12.5mm nominal size)	450.00	SqM			
1.07	Applying a coat of residual petroleum bitumen of penetration 80/100 of approved quality using 1.7 kg. per square meter on damp proof course after cleaning the surface with brushes and finally with a piece of cloth lightly soaked in kerosene oil.	450.00	SqM			
1.08	Extra for providing and mixing water proofing material in cement concrete work / plaster work in the proportion recommended by the manufacturers.	600.00	per bag of 50 Kg. of cement used in the mix.			

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1	2	3	4	5	6	7
1.09	Providing and laying in position machine batched, machine mixed and machine vibrated design mix cement concrete of specified grade for reinforced cement concrete work including pumping of concrete to site of laying but excluding the cost of centering, shuttering finishing and reinforcement.including admixtures in recommended proportion as per IS 9103 to accelerate,retard setting of concrete,improve workability without impiring strength and durability as per direction of Engineer In-Charge.M25 grade reinforcem,ent cement concrete by using 380 Kg of cement per cum of concrete. all work up to floor level.	636.70	cum			
1.10	Reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete.					
	a) Thermo mechanically treated bars / Cold Twisted bars as mentioned in the drawings/specefication.	55.20	Tonne			
1.11	Centering and shuttering including strutting, propping etc. and removal of form for:-					
	a) Foundation, footings, bases of columns etc. for mass concrete.	624	SqM			

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1	2	3	4	5	6	7
	b) Lintels, beams, plinth beams, girders, bressumers and cantilevers etc.	1104.00	SqM			
	c) Columns, Pillar, Piers, Abutments, Posts and Struts.	1272.00	SqM			
	d) Suspended floors, roofs, landing and balconies.	445.00	SqM			
1.12	Brick work with brick of class designation 75 (minm) in foundation and plinth /superstructure above plinth level upto floor II level in cement mortar 1:4 (1 cement :4 coarse sand).					
	a) Foundation and up to plinth	461.70	CuM.			
	b) Above Plinth level up to floor level	564.30	CuM.			
1.13	Stone Work for wall lining etc., (Veneer work) over 12mm thick bed in cement mortar 1:3 (1 cement : 3 coarse sand) including pointing in white cement mortar 1:2 (1 cement : 2 stone dust) with an admixture of pigments matching the stone shade (To be secured to the backing by means of cramps which shall be paid for separately)					
	Red sand stone table rubbed - 25-30mm thick.	270.00	SqM			

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1	2	3	4	5	6	7
1.14	Stone Work , plain in copings, cornices, stringcourses and plinth courses, in cement mortar 1:6(1 cement:6 coarse sand) including pointing with white cement mortar 1:2(1 white cement:2 stone dust) with an admixture of pigment matching the stone shade.					
	a) 30mm thick Red Sand Stone	25.00	CuM			
1.15	Providing and fixing pressed steel door frames conforming to IS 4351 manufactured from commercial mild steel sheet of 1.25mm thickness including necessary welding, hinges jams, lock jamb, bead and if required angle threshold of mild steel angle of section 50X25mm, or base ties of 1.25mm pressed mild steel welded or rigidly fixed together by mechanical means, end adjustable lugs with split end tail to each jamb including steel butt hinges 2.5mm thick with mortar guards, lock strike plate and shock absorbers as specified and applying synthetic enamel paint over a coat of approved polyurethane based synthetic enamel paint over a coat of approved yellow zinc chromate steel primer after pre-treatment of the surface complete all as per drawing and as directed by engineer Incharge.					
	a. Profile B	9.00	Metre			

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1	2	3	4	5	6	7
1.16	Providing and fixing ISI marked flush door shutters non-decorative type, core of block board construction with frame of 1st class hard wood and well matched commercial 3 ply veneering with vertical grains or cross bands and face veneers on both faces of shutters					
	including 25mm thick 2nd class teak wood lipping on all edges of shutters.					
	a) 35mm thick including ISI marked stainless steel butt hinges with necessary screws.	4.00	SqM			
1.17	Providing and fixing ISI mark oxidised MS Tower bolt,Handle,sliding door bolt black finish,(barrel type) with necessary screws etc complete.					
	a) Tower Bolt 250X10mm	1.00	each			
	b) Tower bolt 150X10mm	1.00	each			
	c)Handle 125mm	2.00	each			
	d)Sliding door bolt 300X16mm	1.00	each			
	e) Single rubber stopper (IS: 1868)	1.00	each			
1.18	Providing and fixing aluminium work for Doors, windows as per Item no 21.1 of DSR 2007					
	For Fixed portion					
	a) powder coated aluminium (minimum thickness of powder coating 50 micron)	25.00	KG			
	For Shutters					
	b) powder coated aluminium (minimum thickness of powder coating 50 micron)	25.00	KG			

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1	2	3	4	5	6	7
1.19	Providing and Fixing 18mm thick gang saw cut mirror polished premolded and pre polished as per item 8.2 of DSR 2007					
	Granite of any colour and shade as per engineer incharge	1.00	sqm			
1.20	Steel work welded in built-up sections / single sections/ framed work including cutting hoisting, fixing in position and applying a priming coat of approved steel primer using structural steel etc. as required.					
	a) In gratings, frames, guard bar, ladders, railings, brackets, expansion / seismic separation joints ,boundary wall grills, gates & similar works.	10800.00	Kg.			
1.21	Cement concrete flooring 1:2:4 (1 cement : 2 coarse sand :4 graded stone aggregate) finished with a floating coat of neat cement including cement slurry					
	40 mm thick with 20 mm nominal size stone aggregate	14.00	SqM			
1.22	Cement plaster skirting & dado with cement mortar 1:3 (1 cement: 3 coarse sand) finished with a floating coat of neat cement.					
	18 mm thick	2.00	SqM			



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1	2	3	4	5	6	7
1.23	6 mm cement plaster of mix.1:3 (1 cement : 3 fine sand)	15.00	SqM			
1.24	12 mm cement plaster of mix; 1:6 (1 cement: 6 fine sand)	5600.00	SqM			
1.25	15mm cement plaster on the rough side of single or half brick wall of mix a) 1:4 (1 cement : 4 coarse sand)	400.00	SqM			
1.26	Painting with synthetic enamel paint of approved brand and manufacture to give an even shade:- a) Two or more coats on new work	848.00	SqM			
1.27	Distemping with dry distemper of approved brand and manufacture (two or more coats) and of required shade on new work, over and including priming coat of whitening to give an even shade.	115.00	SqM			
1.28	Finishing walls with water proofing cement paint of approved brand and manufacture and of required shade to give an even shade :- New work (three or more coats)	6230.00	SqM			

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1	2	3	4	5	6	7
1.29	Washed stone grit plaster in two layers, under layer 12mm cement plaster 1:4 (1 cement : 4 coarse sand), furrowing the under layer with scratching tool, applying cement slurry on the under layer @ 2 Kg of cement per square meter, top layer 15 mm cement plaster 1:0.5:2 (1 cement : 0.5 coarse sand : 2 stone chipping 10 mm nominal size) in panels with groove all around as per approved pattern including scrubbing and washing, the top layer with brushes and water to expose the stone chippings, complete as per specification and direction of the Engineer payment for providing grooves shall be made separately) in 50% white cement and 50% ordinary cement in top layer including work at all heights.	4800.00	SqM.			
1.30	Forming groove of uniform size in the top layer of washed stone grit plaster as per approved pattern using wooden battens nailed to the under layer including removal of wooden battens, repair to the edges of the panel and finishing the groove complete as per specifications and direction of the Engineer.					
	a) 15 mm wide and 15 mm deep groove.	17580.00	Meter			

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1	2	3	4	5	6	7
1.31	Making plinth protection 50 mm thick of cement concrete 1:3:6 (1: cement: 3 coarse sand: 6 graded stone aggregate 20 mm nominal size) over 75 mm bed of dry brick ballast 40 mm nominal size well rammed and consolidated and grouted with fine sand including finishing the top smooth.	10.00	SqM			
1.32	Providing and laying integral cement based waterproofing treatment including preparation of surface as required for treatment of roofs, balconies, terraces etc. consisting of following operations.					
	a) Applying and grouting a slurry coat of neat cement using 2.75 kg/sqm of cement admixed with proprietary water proofing compound conforming to IS : 2645 over the RCC slab including cleaning the surface before treatment.					

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1	2	3	4	5	6	7
	b) Laying cement concrete using broken bricks/brick bats 25 mm to 100 mm size with 50% of cement mortar 1:5 (1 cement :5 coarse sand) admixed with proprietary water proofing compound confirming to IS : 2645 over 20 mm thick layer of cement mortar of mix 1:5 (1 cement : 5 coarse sand) admixed with proprietary water proofing compound confirming to IS:2645 to required slope and treating similarly the adjoining walls upto 300 mm height including rounding of junctions of walls and slabs.					
	c) After two days of proper curing applying a second coat of cement slurry admixed with proprietary water proofing compound confirming to IS : 2645.					
	d) Finishing the surface with 20 mm thick joint less cement mortar of mix 1:4 (1 cement: 4 coarse sand) admixed with proprietary water proofing compound confirming to IS: 2645 and finally finishing the surface with trowel with neat cement slurry and making of 300x300 mm square.					
	e) The whole terrace so finished shall be flooded with water for a minimum period of two weeks for curing and for final test. All above operations to be done in order and as directed and specified by the Engineer.					

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1	2	3	4	5	6	7
	With average thickness of 120 mm and minimum thickness at khurra as 65 mm.	15.00	SqM			
	Note: The treatment is to be carried out by a specialized agency with the approval of the Engineer and shall be guaranteed fully effective for a minimum period of 10 years.					
	Notwithstanding this, the responsibility of effectiveness of the treatment shall be fully, entirely and unqualifiedly be that of the main contractor for the work.					
1.33	Providing and fixing stainless steel cramps of required shape and size in RCC/CC backing with cement mortar 1:2 (1 Cement :2 Coarse sand) including drilling necessary hole in stones and embedding the cramp in the hole including and fixing 6mm expansion hold fasteners and accessories complete as per drawing and as directed .	1538.00	Kg.			
1.34	Dismantling work manually / by mechanically means including stacking of serviceable material and disposal of unserviceable material within 50 meter lead as per directions of the Engineer in charge.					
	(a) RCC Work	153.77	cum			
	(b) Brick work in cement mortar and grit plaster	675.00	cum			

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1	2	3	4	5	6	7
1.35	Extra for scraping cleaning and straightening reinforcement from RCC work	7000.00	KG			
1.36	Removing mortar from bricks and cleaning bricks including stacking with in a lead of 50 meter	125.00	1000/nos			
1.37	Deduction for utilization of dismantled servesable material					
	(a) Steel	7000.00	KG			
	(b) Brick	125.00	1000/nos			
	<b>SUB TOTAL</b>					
	<b>Total</b>					
	Total (In Words)					

**END OF VOLUME - V**