

**BHEL : PS-WR
TS NO : BHE/PW/PUR/FINSE-CVL/704
PRICE BID-PART-II (VOL-III)**

REVISED RATE SCHEDULE FOR MAIN CIVIL PACKAGE (09/10/2009)						
PROJECT: FINCHAA SUGAR-ETHIOPIA						
SL NO	DESCRIPTION	UNIT	QUANTITY	RATE in FIG (INR/ ETHIOPIAN BIRR)	RATE (IN WORDS)	AMOUNT
RATE QUOTED BY BIDDER :..... (ie in INDIAN RS / ETIOPIAN BIRR)- Biddere Must Specify the details of currency quoted)						
Part - A : CIVIL , STRUCTURAL & ARCHITECTURAL WORK						
	All the item description shall be read in conjunction with Customer specification Section - VI-C attached with the tender document Vol. II. No extra payment shall be made on account of interpretation of item in isolation. All items shall be goverend by British Standard or Ethiopian Standard. In case of conflict between the two standard Ethiopian Standard shall prevail. It is the responsibility of bidders to arrange British Standard / Ethiopian Standard for thier reference before quoting for this job. No claim shall be entertained by BHEL at later date for not having knowledge of relevant codes for different items of work.					
1.0	EXCAVATION					
1.1	Earthwork in excavation in all kinds of ordinary and hard soil (including slushy soil) up to a depth of 2.0 m below ground level and stacking within a lead of 100 m,with necessary shoring, strutting, trimming and dressing of sides etc., including bailing / pumping out of surface water/rain water/sub soil water, clearing of all shrubs,weeds,grass and cutting minor vegetation including roots, if any, complete as per drawings and specifications.					
a)	All kinds of soil (Ordinary and hard soil)	CU. M.	5,600			
b)	Same as item 1.1 above, but for soft rock/hard rock/sheet rock requiring chiseling / blasting with approval/license from concerned authorities for blasting as well as transporting and storage of explosives.	CU. M.	5,600			

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1.2	Same as Item no-1.1 above but from 2.0 m - 4.0 m depth					
a)	All kinds of soil (Ordinary and hard soil)	CU. M.	1,000			
b)	Same as item 1.1 above, but for soft rock/hard rock/sheet rock requiring chieseling / blasting.	CU. M.	1,000			
1.3	Extra over item no:- 1.1 for every additional lead of 100 m or part there of (beyond the initial lead of 100m as per item 1.1) and stacking within the compound wall.	CU. M.	500			
1.4	Extra over item no:- 1.2 for every additional lift of 1.0 m or part there of	CU. M.	500			
2.0	BACKFILLING :					
2.1	Earthwork in backfilling & compacting in layers not exceeding 150 mm, around foundations, trenches , below grade slabs and all other locations ,each layer shall be watered and throughly consolidated with roller/mechanical compactor. At location where rolling is not possible each layer rammed with heavy rammer, clods or rocks over 200mm size shall be placed in upper 150 mm portion of the fill as per specs, drawings and as directed by the Engineer.					
a)	With earth (generated from excavation) obtained from stacks within a lead of 100m	CU. M.	5,500			
b)	Extra over 2.1(a) for every additional lead of 100m or part there of within battery limit (compound wall)	CU. M.	500			
c)	With selected CNS earth (cohesive non-swelling / murrum) obtained from borrow pits outside the battery limit within a lead of 5.0 Km inclusive of necessary royalty charges.	CU. M.	500			
d)	Extra over 2.1 (c) for every additional lead of 1 Km or part thereof	CU. M.	200			

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2.2	Supplying and filling river sand in layers not exceeding 150mm including compacting by mechanical means, flooding with water etc all complete as per specification and as directed by the Engineer.	CU. M.	200			
2.3	a) Removal of surplus earth & debris beyond battery limit (compound wall) upto 5 Km lead including transportatin, loading and unloading , dumping, stacking, levelling and dressing etc.complete as per specifications and drawings.	CU. M.	6,700			
b)	Extra over 2.3a for every additional lead of 1Km or part thereof	CU. M.	500			
2.4	a) Site grading and levelling with filling excavated earth obtained from foundations in layers not exceeding 150 mm within the project area using mechanical / manual means breaking clods, cutting heaps, compacting using compaction equipment in non-accessible areas and rolling with road roller in open areas to obtain 95% of proctor density for cohesive soils and 85 % for non-cohesive soils, all complete as drgs and specifications.	CU. M.	1,000			
2.4	b) Removal of dense grass, bushes, shrubs, wild growth, plants, vegetations including roots by stripping the earth 300mm depth from top and consolidating the same by road roller of 8 - 10MT capacity including transportation, loading and unloading , dumping, stacking, levelling, disposing to the area earmarked for this purpose up to a lead of 5km and dressing etc.complete as per specifications before site grading and levelling	SQM	50,000			
3.0	CONCRETE					

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3.1	Supplying, laying in position, compacting and curing as per specification Plain cement concrete (using OPC- grade-53) of the following mix with 20mm down size aggregates below GL and upto 1.0M above GL , including consolidation of subgrade wherever required.					
a)	1:5:10	CU. M.	180			
b)	1:4:8	CU. M.	86			
c)	1:3:6	CU. M.	180			
3.2	Supplying, laying in position, curing as per specifications Controlled concrete (using OPC grade-53) of the following grades (graded coarse aggregates of 40mm down, 20mm down 12mm down shall be used wherever applicable). The temperature of concrete should not exceed 23Deg.C at the time of pouring. Only RMC (Ready mix concrete generated from automatic concrete batching plant shall be used)					
a)	for all depths below GL and 1.0 m above GL					
	i) Grade M-20 for foundations, slabs, columns, floors, beams etc with minimum cement content of 320 kg/m ³	CU. M.	1,795			
	ii) Grade M-30 in STG foundation etc with minimum cement content of 380 kg/m ³	CU. M.	120			
b)	for all elevations 1m above G.L.					
	i) Grade M-20 with minimum cement content of 320 kg/m ³	CU. M.	300			

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	ii) Grade M-30 for with minimum cement content of 380 kg/m ³ of concrete for STG top deck/columns above raft at all levels including addition of suitable plastisizers conforming to relevant BS/ES code to achieve required strength in concrete as per manufacturers recommendations, preparation of scheme for concreting, getting it approved by engineer.	CU. M.	180			
3.3	Providing and placing in position RCC of grade M20 (using OPC grade 53) of 12mm & down graded chips with min. cement content of 320 kg/m ³ for encasing of steel structures at all elevations as per drawings, specifications , all complete.	CU.M	20			
3.40	Providing and placing in position, compating , curing Reinforced concrete for paving of M20 grade with min. cement content of 320 kg/m ³ (using OPC grade-53) including laying in approved size panels, leaving grooves for sealing joints, cost of form work, finishing of top surface as required but excluding cost of reinforcement which will be paid under relevant items, etc.all complete for floors and pavement as per specifications.	CU.M	300			
3.4a	Making openings/cutouts of any shape & size in RCC slabs at any elevation using special tools (viz. using concrete cutter with diamond bit) for pipes/cables noticed during erection & commissioning activity and wherever required. Rate shall be inclusive of labour, materials, T&Ps and scaffolding.	CU.M	3			
3.5a)	Supplying, mixing and application of integral water proofing compound conforming to ethiopian building code/british standard in cement concrete / cement mortar etc. all complete as per drawings and specifications.	Kgs	100			

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b)	Providing and Fixing in position 12mm thick approved bitumen impregnated fibre board conforming to ethiopian building code/british standard in expansion joints etc all complete as per specifications and drawings.	SQ. M.	15			
3.6	Providing and Fixing in position 20mm thick approved bitumen impregnated fibre board conforming to ethiopian building code/british standard in expansion joints etc all complete as per specifications and drawings.	SQ. M.	76			
3.7	Supplying and laying mastic bitumen sealing compound as per specification.					
	a) 20mm wide,25mm deep	R.M.	350			
	b) 10mm wide,40mm deep	R.M.	1,400			
3.8	Providing and placing in position precast reinforced concrete trench covers of grade M20 (using OPC grade-53) of varying thickness including reinforcement, shuttering, lifting lugs etc., all complete including edge angles as per drawing and specifications. Reinforcement will be paid under item 5.1 (b) and edge angles will be paid for under item 6.1(d)	CU. M	175			
3.9 (a)	Supplying and installing ribbed PVC water stops 6mm thick and 150mm wide in cement concrete including laps by fixing / valcanizing joints and folds as applicable etc. all complete as per spec. and approved by the Engineer.PVC water stopper shall be coated on either side with hot asphalt.The longitudinal joints in water stops shall preferably be hot welded or overlapped at least 200mm	RM	500			

BHEL : PS-WR
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3.9 (b)	Supplying and installing ribbed PVC water stops 6mm thick and 225mm wide in cement concrete including laps by fixing / vulcanizing joints and folds as applicable etc. all complete as per spec. and approved by the Engineer.PVC water stopper shall be coated on either side with hot asphalt.The longitudinal joints in water stops shall preferably be hot welded or overlapped at least 200mm.	RM	500			
3.10	Providing and placing in position HDG grating (heavy duty galvanized) including laying in approved size panels, finishing etc. complete as per specifications.	SQ.M.	100			
3.11	Grouting under equipment bases as required,curing and finishing the exposed surfaces including all materials, form work etc. as per drawings and directions of the Engineer.					
a)	With 1:1:2 cement sand and 6mm down stone chips with 28 days minimum cube strength of 25 N/mm ²	CU. M.	5			
b)	Same as item 3.11 (a) but using non shring grout like conbextra GP1 or approved equivalent, including cost of grout mix, form work, finishing , curing etc. , all complete as per drawings and manufacturers' specifications.	CU. M.	5			
c)	Same as item 3.10 (a) but using non shring grout like conbextra GP2 or approved equivalent, including cost of grout mix etc. , all complete as per drawings and manufacturers' specifications.	CU. M.	5			
4.0	FORM WORK					

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4.1	Supplying, installing, dismantling and removing the following classes 'of formwork as per drawings and specifications at all levels using steel / plywood wood shuttering. The surface of shuttering coming in contact with construction shall have plastic coating of approval make. Formwork shall be rigidly constructed of boards as per Ethiopian building code standard /British standard. The tolerances of shuttering at any time will be as set forth in ES/BS code.					
a)	Straight in plan (including raft of STG.)	SQ.M.	8,825			
b)	Curved in plan	SQ.M.	100			
c)	Fairface formwork for columns and top deck of STG above raft.	SQ.M.	1,200			
4.2	Providing Pockets in concrete of sectional area less than 0.1 sq.m in plan by fixing and removing formwork for anchor bolts , pipe sleeves etc. as per drgs including. all materials ,labour etc. complete as per drawings and specifications.					
a)	Up to 300 mm TO 600 mm deep	Nos.	786			
b)	Upto 600mm to 1000mm depth	Nos.	672			
c)	Up to1000 mm to 1500 mm deep	Nos.	20			
d)	Greater than 1500 mm deep	Nos.	20			

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5.0	REINFORCEMENT,					
5.1	Supplying, bending, binding, transporting and placing in position following types of High Yield Strength Deformed (HYSD) bars reinforcement of grade conforming to Ethiopian building code standard /British standard of all diameters and at all elevations using approved quality binding wires as per specifications and drawings. All bars are to be lapped by 50 x dia of bar and not more than 33% of the bar shall have lapped joints at same location. Quoted rate shall be inclusive of laboratory test of reinforcement bars as per requirement of BHEL/Customer					
	a) MS reinforcement	M.T.	10			
	b) HYSD reinforcement	M.T.	300			
5.2	Supplying and fixing steel wire mesh 10 SWG,100X100mm mesh, as reinforcement for encasing steel columns at all elevations as per drawings and specifications.	Sq. m.	50			

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6.0	STRUCTURAL STEEL: Steel products shall comply with the requirement of BS 4360 and BS 6363 (Black steel to be primed during fabrication and surface treated after installation. Hot dip galvanized steel shall comply with the requirement of BS 729). Structural use of steel in building shall comply with BS5950 or equivalent. Fabrication , Erection and approval of steel structures shall be in compliance with Ethiopian Building code standard/ British standard. Fabrication shall be in accordance with the requirement of BS 5950 standard.					
6.1	Supplying, fabricating using approved quality electrodes as per BS standard, preheating, packing and delivering at site of the following categories of Structural steel works including cost of steel, all necessary bolts, nuts and washers with a shop coat of primer compatible with final paint system-complete as per drawings and specifications.					
a)	Steel work consisting of portal frames , laced & plated columns, beams, fabricated with standard rolled sections, plates , flats, angles pipes etc.	M.T.	750			
b)	Steel work consisting of roof trusses with standard rolled sections, plates, flats, angles, pipes etc.	M.T.	80			
c)	Steel work consisting of purlins, non plated beams , bracings, sag rods with anchor cleats / end plates	M.T.	30			
d)	Miscellaneous steel work such as cable trench cover frames, fencing poles etc.	M.T.	20			

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6.2	Erection of structural steel as described in 6.1 including grouting under bases using Convextra GP1,with necessary erection bolts, nuts & washers, welding electrodes wherever required, final finish paint etc all complete as drawings and specifications.	M.T	880			
6.3	Supplying, fabricating and fixing in positions MS inserts like channels, angles, flats, rounds, plates, pipe sleeves and any other structural shape etc. including cost of steel , necessary templates / stagings, cutting to required lengths, bolting revetting welding,painting etc. as required all complete as per drawings and specifications.	M.T.	24			
6.4	Supplying, fabricating and fixing in positions foundation hardware in concrete including cost of rail sections, necessary templates / stagings, cutting to required lengths, bolting revetting welding,painting etc. as required all complete as per drawings and specifications.All washers ,nuts, bolts shall be Galvanized	M.T.	20			
6.5	Taking delivery of foundation hardware supplied by BHEL and transporting to site, fixing in position foundation hardware such as anchor bolts, nuts, washers, anchor assembly, painting etc. as per drawing including fixing to proper level and alignment using contractor's own templates, protecting till handover of the foundation, all complete as per drawings and specifications.Back hexagonal , bolt screw and nut shall conform to BS4190 or equivalent	M.T.	5			
6.6	Supplying and erecting hot dip galvanised GI floor gratings with minimum coating of 710 gms per sq.m. , staircase steps as per dwg including all fasteners, painting with two coats of aluminium paint at the places of site welding etc all complete as per specifications.	M.T	25			

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6.7	Supplying, fabricating, fixing in position 32NB MS pipe handrails at various elevation including cost of materials, consummables, labour, painting with synthetic enamel paint etc. all complete as per drawing and specifications.	R.M.	1,300			
6.8	Supplying, fabricating, fixing in position by welding 18 gauge MS sheets to steel columns for encasing at various elevations , including painting etc. all complete as per drawings and specifications.	M.T	5			
6.9	Supplying, fabricating, fixing in position 24G welded wire mesh to steel columns for encasing at various elevations , all complete as per drawings and specifications.	SQ.M.	50			
6.10	Supplying, installing and fixing in position pre-coated galvanised corrugated sheet conforming to ESC.D7.026 or equivalent for roof & side cladding of buildings with all necessary nuts, bolts,side cladding and washers and any other fixing material and means as required as per manufacturer specifications at all elevations as per drawings and specifications. Size of corrugation shall be 10/75 mm confirming to Ethiopian building code/British standard sheet of 20 gauges.Fixing of roof sheet shall be of 10 mm diameter and side sheeting with 8 mm diameter GI hook bolts.All bolts shall pass through the crown of corrugation and shall be provided with limped or diamond washer ,round washer over bitumen felt washer and square nuts. ... contd	SQ.M.	1,200			
	contd..... All sheets shall be stiched together with 6 mm G.I.Incase of gable side steel lap,the purlin shall be staggered between alternate crown,and the G.I sheet washer and round washer shall be provided under screw head which shall be always on the outside of building.					

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6.11	Supplying, fabricating and fixing in positions Seismic Arrestor inserts made up of pipes, channels, angles, flats, rounds, plates, pipe sleeves and any other structural shape etc. including cost of steel, necessary templates / stagings, cutting to required lengths, machining of top surfaces, bolting revetting welding etc. as required all complete as per drawing No:-3-38144-00036 and specifications.	M.T.	1			
6.12	Providing & installing the following Galvanised steel sheet specials conforming to ESC.D7.001 or equivalent and roofing accessories with standard laps including all drilling, cutting & grouting required to give water tight finish with all bolts, nuts, washers, hangers, spacers, drilled holes to be suitably painted before erecting & fixing etc., complete as per specification					
	a) Ridge with close fitting adjustable ridge pieces including finish.	RM	35			
	b) Eaves gutter E30 or equivalent with accessories.	RM	70			
	c) Half round gutter coper bearing steel confirming to Grade-A of IS:2064	RM	35			
	d) S type louver with fixtures.	SQ.M.	20			
	e) Barge boards with all fixtures.	RM	20			
	f) North light curves	SQ.M.	20			
6.13	Supplying, fabricating, packing and delivering at the stores at site of the following categories of steel work (Rail) including all necessary bolts, nuts, washers etc.					
	a) CR80 Rail	MT.	1			
	b) LB90 Rail	MT.	1			

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7.0	MASONRY & ALLIED WORKS,					
	Rubble stone massonary in cement mortar 1:6 in foundations, basement and super structure as per specifications (Using OPC grade-53 cement). Sized stones shall be of hard granite ,basalt or trap stone obtainble from approved quarry.Bond or through stone shall be provided not exceeding 2m apart in each course and shall be staggered, bond stone shall be from front to back of the walls.Chips ,spalls shall be used to avoid thick mortar joints and shall not exceed 10% of the quantity of stone masonry .Rough dressed stone shall be built in sizes not less than 300mm high per course and 400mm wide per stone. The joinery shall be raked out to a depth of approximately 15mm as the work proceeds and prepared for painting.					
7.1	Supplying and laying of coarsed rubble stone massonary in cement mortar 1:6 in foundations and basement as per specifications (Using OPC grade-53 cement).	CU.M.	10			
7.2(a)	Supplying and laying in position stone work in foundation and super structure in cement sand mortar (1:6) including mixing mortar, laying stones,raking of joints, curing etc., all complete as per drawings as spefications. (Using OPC grade-53 cement).	CU.M.	20			
7.2(b)	Supplying and laying in position Concrete solid Block Work of class AA as per BATCODA standards of any thickness in foundation and upto plinth in cement sand mortar (1:6) including mixing mortar, laying Concrete Blocks ,raking of joints , curing etc., all complete as per drawings and spefications. (Using OPC grade-53 cement). Sub grade concrete block masonry walls shall be built in least porosity. Ref. clause 24.6.4 of technical specification.	CU.M.	20			

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7.2(c)	Supplying and laying in position Concrete solid Block Work of class AA as per BATCODA standards of any thickness in foundation and upto plinth in cement sand mortar (1:4) including mixing mortar, laying Concrete Blocks ,raking of joints, curing etc., all complete as per drawings and specifications. (Using OPC grade-53 cement). Sub grade concrete block masonry walls shall be built in least porosity. Ref. clause 24.6.4 of technical specification.	CU.M.	50			
7.3	Similar to 7.2 (c) in super-structure at all elevations by using Concrete solid Block Work of class AA as per BATCODA standards of any thickness . For above grade block work, the horizontal and vertical joints of block facing walls shall be raked out to a minimum depth of 10mm and prepared for cement pointing .	CU.M.	320			
7.4	Supplying and laying in position Concrete solid Block Work of class AA as per BATCODA standards of any thickness in partition walls in cement sand mortar (1:4) including mixing mortar, laying Concrete Blocks ,raking of joints , curing etc., all complete as per drawings and specifications. (Using OPC grade-53 cement). Sub grade concrete block masonry walls shall be built in least porosity. Ref. clause 24.6.4 of technical specification.	CU.M.	27			
7.5	Supplying and laying damp proof course 40mm thick with plain concrete (1:1 ¹ / ₂ : 3) nominal mix by volume with 12mm down size aggregates and minimum 3% admixture of water proofing compound with all materials complete as per specifications.	CU.M.	5			

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7.6	Providing 12mm thick cement-sand (1:6) plastering to the interior faces of the walls & RCC columns coming in line with side of the wall at various elevations including mixing, laying , finishing,curing, rounding corners, cutting grooves, wherever required, etc. with all materials complete as per drawings and specifications. (Using OPC grade-53 cement).	SQ. M	4,000			
7.7	Providing 18mm thick cement-sand (1:6) plastering to the exterior faces of the walls & RCC columns coming in line with side of the wall at various elevations including mixing, laying , finishing,curing, rounding corners, cutting grooves, wherever required, etc. with all materials complete as per drawings and specifications. (using OPC grade-53)	SQ. M	4,000			
7.8	Providing water proof cement plaster 1:3 mix with suitable proportion of an integral water proofing compound in two coats.the first coat being 12 mm thick and 2nd coat of 10 mm thick with hexagonal netting of 0.63 mm dia at various elevations including mixing, laying , finishing,curing, rounding corners, cutting grooves, wherever required, etc. with all materials complete as per drawings and specifications as directed by Engineer (using OPC grade-53).	SQ. M	340			
7.9	Providing minimum 6 mm thick (1:4) cement sand ceiling plaster for beams, slabs etc. similar to item 7.7 above (Using OPC grade-53 cement)	SQ.M	1,200			
7.10	Drip course at various elevations to parapet, chajja, windows, door heads etc. with all material complete as per drawings, spcns. And directions of the engineer.	R.M.	200			
7.11	Providing 12mm wide x 12 mm deep rectangular grooves in plaster for architectural purposes, including all materials, etc. all complete. as per drawings .	R.M.	200			

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7.12	Extra over plaster for providing neat cement finish	SQ.M.	4,000			
7.13	Providing 2mm thick plaster of paris punning to newly plastered surfaces at various elevations with all materials etc., complete as per specifications and directions of engineer.	SQ.M.	300			
7.14	Supplying and fixing 24 G chicken wire mesh at junctions of Concrete Block work and concrete work before plastering at various elevations locations as shown in drawings and as directed by the Engineer	SQ.M.	50			
7.15	Providing average 50mm thick 1:2:4 cement screed with 6mm down stone chips, to required slope with all materials, hacking the old concrete, finishing, curing etc., as per drgs & specifications.	CU.M	10			
7.16	Providing and placing in position 50mm thick lath plaster in CM 1:4 for fins, drops etc. including providing and fixing 24 G metal lath (wire mesh) but excluding cost of reinforcement.	SQ.M.	20			
8.0	FLOORING :					
8.1	Supplying and laying 40mm thick precast terrazzo tiled flooring of approved quality, size and colour at various elevations including preparations of base laying underbed & tiles with white cement based topping, curing rubbing , polishing etc. with all materials complete as per drgs., finish schedule and specifications.	SQ.M.	20			
8.2	Supplying and laying 32mm thick precast terrazzo tiled skirting of approved quality, size and colour at various elevations including preparations of base laying underbed & tiles with white cement based topping, curing rubbing , polishing etc. with all materials complete as per drgs., finish schedule and specifications.	SQ.M.	5			
8.3	Providing 3 mm thick neat cement finish over concrete base for flooring paving etc.	SQ.M.	100			

BHEL : PS-WR
TS NO : BHE/PW/PUR/FINSE-CVL/704
PRICE BID-PART-II (VOL-III)

REVISED RATE SCHEDULE FOR MAIN CIVIL PACKAGE (09/10/2009)						
PROJECT: FINCHAA SUGAR-ETHIOPIA						
SL NO	DESCRIPTION	UNIT	QUANTITY	RATE in FIG (INR/ ETHIOPIAN BIRR)	RATE (IN WORDS)	AMOUNT
8.4	Supplying, laying acid resistant tiled floor / DADO as per IS:4457 with 20mm minimum thickness tiles of minimum compressive strength of 700kg/cm ² from approved manufacturers' at various elevations including preparation of base laying underbed of 6mm thick potassium silicate based mortar over 3layers of bitumen grade 85/25(total 3mm thick) as per IS:702 over 12mm thick CM(1:3), pointing of size 6mm x 18 mm deep with CSNL mortar or equivalent including curing of the joints with dilute hydrochloric acid(25 %) as per manufacture's specifications , with all materials complete as per drawing and specifications.	SQ.M.	185			
8.6	Supplying and laying matt finished ceramic tiles flooring & skirting of approved make, size and shade conforming to Ethiopian Building code /British standard at various elevations including pereparation of base laying underbed, finishing and rounding corners and junctions, curing etc. complete as per drawings and specifications.	SQ.M.	150			
8.7	Laying 21 mm thick grey cement skirting(1:3) including preparation of base , laying underbed, finishing with neat cement, rounding corners and junctions, cutting grooves, if required curing etc., complete as per drawings and specifications.	SQ.M.	20			
8.9	Supply and laying of 3mm thick PVC skirting including preparation, fixing tile finishing etc., all complete as per approved manufacturer's specifications.	SQ.M.	15			
8.10	Supplying and laying cement tiles of approved make conforming to Ethiopian Building code /British standard for flooring including pereparation of base laying underbed, finishing and rounding corners and junctions, curing etc. complete as per drawings and specifications.	SQ.M.	20			

BHEL : PS-WR
TS NO : BHE/PW/PUR/FINSE-CVL/704
PRICE BID-PART-II (VOL-III)

REVISED RATE SCHEDULE FOR MAIN CIVIL PACKAGE (09/10/2009)						
PROJECT: FINCHAA SUGAR-ETHIOPIA						
SL NO	DESCRIPTION	UNIT	QUANTITY	RATE in FIG (INR/ ETHIOPIAN BIRR)	RATE (IN WORDS)	AMOUNT
8.11	Supply and laying insitu mosaic finish for flooring, dado & skirting on a base coat of 12mm thick cement mortar 1:4 proportion a top layer 10mm thk consisting of marble chips upto 10mm size of approved color mixed with paste depending of the base color including pereparation of base laying underbed, finishing and rounding corners and junctions, curing etc. complete as per drawings and specifications.	SQ.M.	20			
8.12	Supplying and laying 50 mm thick granolithic flooring with metallic hardeners complying with Ethiopian Standard code/British standard consists of concrete base with 6mm to 10mm wearing coat with glass strip of 5mm thick x 50mm at various elevations including preparations of base laying underbed, curing rubbing, cleaning of surface etc. with all materials complete as per drgs., finish schedule and specifications as directed by Engineer.	SQ.M.	1,300			

BHEL : PS-WR
TS NO : BHE/PW/PUR/FINSE-CVL/704
PRICE BID-PART-II (VOL-III)

REVISED RATE SCHEDULE FOR MAIN CIVIL PACKAGE (09/10/2009)						
PROJECT: FINCHAA SUGAR-ETHIOPIA						
SL NO	DESCRIPTION	UNIT	QUANTITY	RATE in FIG (INR/ ETHIOPIAN BIRR)	RATE (IN WORDS)	AMOUNT
9.0	FALSE FLOORING					
	Supplying, erecting, fitting & laying false flooring with cold formed steel channel sections and cast grooved head supports by adjusting threaded studs of 30 mm dia 600 mm long and tiles of 35 mm thick approved quality phenol bonded particle board with bottom side 0.05 mm thick Aluminium foil & top side 3mm thick best quality approved pressure laminate / antistatic PVC tile, conforming to IS:3462 for topping and PVC lipping for the edges including all necessary nuts, bolts, washers etc, all complete as per drawing and specifications.	SQ. M.	1,000			
10.0	FALSE CEILING					
10.1	Providing and fixing aluminum panel false ceiling system of approved make including under deck insulation comprising of 150 mm wide 15 mm deep roll formed panels consisting of length upto 6 m, coil coated on both sides, rolled formed from stove enamelled corrosion resistant 0.5mm thick aluminium alloy AA-3105 and perforated panels for return air as per air conditioning requirements including 32mm wide & 39mm deep panel carriers made of roll formed coated steel with 0.95mm thick aluminium alloy with cutouts to hold the panels in the module of 90/100mm , including suspending carries from roof by 4mm dia galvanised steel hanger with steel by "j" hooks & nylon inserts, height adjustment clips made of spring steel at .max 1200mm c/c including providing profiles gap closure strips etc., slit openings for fixing supply / return air grill, lighting fixtres, AC diffusers etc. all complete as per drawings and specifications.	SQ. M.	1,000			

BHEL : PS-WR
TS NO : BHE/PW/PUR/FINSE-CVL/704
PRICE BID-PART-II (VOL-III)

REVISED RATE SCHEDULE FOR MAIN CIVIL PACKAGE (09/10/2009)						
PROJECT: FINCHAA SUGAR-ETHIOPIA						
SL NO	DESCRIPTION	UNIT	QUANTITY	RATE in FIG (INR/ ETHIOPIAN BIRR)	RATE (IN WORDS)	AMOUNT
10.2	Supplying and fixing moisture resistant gypsum board false ceiling system including underdeck insulation comprising of 12mm thick gypsum board tiles of approved qualities and fixing to under side of grid system with 12.5mm dia dry wall screw @ 230mm c/c , and grid system made of 0.9mm thk. 45mm size and two flanges of 15mm each GI main runner suspended from ceiling @ 1.2m by means of bolting to GI cleat fixed the ceiling with dash fastners, 0.5 thk. knurled web of 51.1mm and two flanges of 26mm GI channel shaped cross runners and 0.5mm thick web size of 27mm one flange 20mm other 30mm wall runners fixed to peripheral walls by rawl plugs/ dash fasteners @ 450mm c/c including finishing, levelling and aligning etc. all complete as per specifications.	SQ. M.	100			
11.0	PAINTING :The paint shall conform to relevant Ethiopian building code /British standard specification . The manner of taking measurment will be in accordance with Ethiopian building code standard /British standard .					
11.1	Providing minimum two coats of acid resistant paint over a coat of primer, if required, as per manufactures instructions to plastered surfaces. incuding preparation of sufaces, scaffolding etc., all complete as per drawings and specifications	SQ.M.	300			
11.2	Providing complete Protective coating system to Stuctural Steel with one coat of primer over one coat of primer applied at shop and 2 coats of finish paint of synthetic enamel of approved colour with all materials, consumables and scaffoldings complete as per specifications and drawings.					
	a) Trusses, purlins etc.	M.T.	1,240			

BHEL : PS-WR
TS NO : BHE/PW/PUR/FINSE-CVL/704
PRICE BID-PART-II (VOL-III)

REVISED RATE SCHEDULE FOR MAIN CIVIL PACKAGE (09/10/2009)						
PROJECT: FINCHAA SUGAR-ETHIOPIA						
SL NO	DESCRIPTION	UNIT	QUANTITY	RATE in FIG (INR/ ETHIOPIAN BIRR)	RATE (IN WORDS)	AMOUNT
	b) Sheeting works	SQ.M.	10			
11.3	Providing & applying to interior surfaces two or three coats of Oil Bound distemper of approved shade & make to obtain a even finish and uniform color over a coat of primer as per manufacture recommendation including cost of paint, surface preparation, scaffolding etc, all complete as per spec. and drawing.	SQ.M.	1,800			
11.4	Providing one coat of primer over one coat of primer applied at shop and 2 coats of finish paint of synthetic enamel paint to structural sheets of approved colour with all materials, consumables and scaffoldings complete as per specifications and drawings.	SQ.M.	50			
11.5	Providing three or more coats of white/colour cement wash to give a smooth and even shade including cleaning & preperation of surfaces scaffolding etc., all complete as per specifications.	SQ.M.	1,200			
11.6	Providing & applying two or three coats of water bound distemper of approved shade & make to obtain a even finish and uniform color over a coat of primer as per manufacture recommendation including cost of paint, surface preparation, scaffolding etc, all complete as per spec. and drawing.	SQ.M.	1,800			
11.7	Providing two coats of Acrylic emulsion paint to give a smooth and even shade including cleaning & preperation of surfaces scaffolding etc., all complete as per specifications.	SQ.M.	400			
11.8	Providing two coats of Synthetic enamel paint over wood work at various elevations , including all materials, surface preparation, finishing, polishing etc. all complete, as per drawings and specifications.	SQ.M.	10			

BHEL : PS-WR
TS NO : BHE/PW/PUR/FINSE-CVL/704
PRICE BID-PART-II (VOL-III)

REVISED RATE SCHEDULE FOR MAIN CIVIL PACKAGE (09/10/2009)						
PROJECT: FINCHAA SUGAR-ETHIOPIA						
SL NO	DESCRIPTION	UNIT	QUANTITY	RATE in FIG (INR/ ETHIOPIAN BIRR)	RATE (IN WORDS)	AMOUNT
11.9	Providing two coats of Polishing over wood work at various elevations , including all materials, surface preparation, finishing, polishing etc. all complete, as per drawings and specifications.	SQ.M.	10			
11.10	Providing two or more coats of water proof cement paint of approved make and shade including cost of paint, cleaning and surface preparation, priming coat materials, scaffoldings etc. all complete as per specification.	SQ.M.	4,000			
11.11	Providing two coats of Epoxy paint on floor finish and walls at various elevations , including all materials, surface preparation, finishing, polishing etc. all complete, as per drawings and specifications.	SQ.M.	20			
12.0	ROOF WATER PROOFING					
12.1	Preparation of grading underbed with 1:2:4 mix using 12mm down graded coarse aggregate at various elevations including mixing, laying, curing etc. in varying thickness with all materials complete as per drawings and specifications.	SQ.M.	300			
12.2	Preparation of average 25 mm thick grading underbed with 1:4 cement coarse sand mortar and mixing 2% water proofing chemical admixtures of approved brand at various elevations including mixing laying, curing etc. with all materials complete as pe drawings & specifications.	SQ.M.	300			
12.3	Supplying and laying Membrane type Water Proofing treatment with cementitious material FOSROC make or approved equivelant as per specification all complete with mateterial, consumables, scaffoldings, labour etc.	SQ.M.	300			
12.4	Same as Item No-12.3 above but for flashing at junction of slab and parapet wall including preparation of surfaces, cutting grooves, caulking the end of flashing etc. complete as <i>spec</i> .	SQ.M.	20			

BHEL : PS-WR
TS NO : BHE/PW/PUR/FINSE-CVL/704
PRICE BID-PART-II (VOL-III)

REVISED RATE SCHEDULE FOR MAIN CIVIL PACKAGE (09/10/2009)						
PROJECT: FINCHAA SUGAR-ETHIOPIA						
SL NO	DESCRIPTION	UNIT	QUANTITY	RATE in FIG (INR/ ETHIOPIAN BIRR)	RATE (IN WORDS)	AMOUNT
13	Providing and making 150x150mm size fillets in cement concrete 1:2:4 at junctions of roof slab and parapet wall including cutting groves, rounding corners, finishing etc. all complete as per drawings and specifications.	CU.M.	1			
13.0	DOORS, WINDOWS & VENTILATORS					
13.1	Providing and fixing Steel windows of prepainted MS profiles with synthetic enamel paint and 4mm thick clear glass (glazing to be paid under item no. 13.7) including handles, peg stays, stoppers, hinges, safety grill etc all complete as per specifications and drawings excluding .					
	a) fixed type	SQ.M.	50			
	b) openable type	SQ.M.	100			
	c) louvers	SQ.M.	50			
13.2	Providing and fixing sliding windows of extruded aluminum profile and stainless steel tracks with 4mm thick clear glass (glazing to be paid under item no. 13.7) including handles, peg stays, stoppers, hinges, safety grill and painting with two coats of approved make epoxy paint over a coat of suitable primer etc all complete as per specifications and drawings .	SQ.M.	10			
13.3	Providing and fixing sliding doors of extruded aluminum profile and stainless steel tracks with 4mm thick clear glass (glazing to be paid under item no. 13.7) including handles, peg stays, stoppers, hinges, safety grill and painting with two coats of approved make epoxy paint over a coat of suitable primer etc all complete as per specifications and drawings. Heavy duty sliding door shall be built in profiles produced from steel sections as per BS 4360.	SQ.M.	20			

BHEL : PS-WR
TS NO : BHE/PW/PUR/FINSE-CVL/704
PRICE BID-PART-II (VOL-III)

REVISED RATE SCHEDULE FOR MAIN CIVIL PACKAGE (09/10/2009)						
PROJECT: FINCHAA SUGAR-ETHIOPIA						
SL NO	DESCRIPTION	UNIT	QUANTITY	RATE in FIG (INR/ ETHIOPIAN BIRR)	RATE (IN WORDS)	AMOUNT
13.2	Supplying and erecting including assembling fitting and fixing best quality Pressed steel doors of 18 gauge prepainted MS sheets, with 20 gauge prepainted pressed steel frames at various elevations including frames, shutters, fittings and fixtures, CP mortice lock cum handle mastic caulking, grouting the frames etc. complete as per specifications.					
	a) Single shutter	SQ.M.	40			
	b) Double shutter	SQ.M.	40			
13.3	Same as item 13.2 but with 150mm X 500mm vision panels with 6 mm thk. clear glass (glazing to be paid under item no. 13.7) etc. complete as per specifications.					
	a) Single shutter	SQ.M.	30			
	b) Double shutter	SQ.M.	30			
13	Providing and fixing 22g aluminium sheet (Wrought aluminium and aluminium alloy sheet and strip shall conform to BS1470 or equivalent) wherever required as per specification or as directed by the Engineer.	SQ.M.	5			
13.5	Providing and fixing approved quality hydraulic door closer as per specification and drawing and as directed by the Engineer.	Nos	20			
13.6	Providing and fixing 2mm thk. approved quality rubber sealing strip around doors and windows for making them air tight including cost of rubber strip adhesive, clips etc. all complete as per specifications and drawings.	R.M.	200			

BHEL : PS-WR
TS NO : BHE/PW/PUR/FINSE-CVL/704
PRICE BID-PART-II (VOL-III)

REVISED RATE SCHEDULE FOR MAIN CIVIL PACKAGE (09/10/2009)						
PROJECT: FINCHAA SUGAR-ETHIOPIA						
SL NO	DESCRIPTION	UNIT	QUANTITY	RATE in FIG (INR/ ETHIOPIAN BIRR)	RATE (IN WORDS)	AMOUNT
13.7	Supplying fitting and fixing the following glazing specials at various elevations including supplying rubber beading, (cost of putty and glazing clips for fixing to windows, doors, partitions and ventilators), all materials etc. complete as per specifications to alluminium windows, doors & partitions / steel windows .					
a)	4mm thick clear glass	SQ.M.	300			
b)	6.3 mm thick clear glass	SQ.M.	200			
c)	6.3 mm thick toughned glass	SQ.M.	10			
13.8	Supplying and erecting including assembling fitting and fixing electrostatically Powder coated aluminum windows with 6.3mm thk. toughned glass (glazing to be paid under item no. 13.7) at various elevations including frames and shutters , transomes, mullions, fittings and fixtures, coating,aluminium beading, but excluding glazing, complete as per specifications and drgs. (alluminium hollow sections should be infilled with timber of silver oak) as per specifications.					
a)	Openable type	SQ.M.	60			
b)	Fixed type	SQ.M.	30			
c)	Fixed Double glass windows at STG operating floor level 2.4 m high	SQ.M.	40			
13.9	Supplying and erecting including assembling fitting and fixing Powder Coated Aluminium partition frames with matching doors etc., as per specifications with frames, shutters, double acting heavy duty floor springs, fittings, and fixtures, coating,mortice lock, alluminium beading but excluding glazing etc. complete (aluminium hollow sections should be infilled with timber of silver oak)	SQ.M.	240			

**BHEL : PS-WR
TS NO : BHE/PW/PUR/FINSE-CVL/704
PRICE BID-PART-II (VOL-III)**

REVISED RATE SCHEDULE FOR MAIN CIVIL PACKAGE (09/10/2009)						
PROJECT: FINCHAA SUGAR-ETHIOPIA						
SL NO	DESCRIPTION	UNIT	QUANTITY	RATE in FIG (INR/ ETHIOPIAN BIRR)	RATE (IN WORDS)	AMOUNT
13.10	Supplying,fitting and fixing Powder coated Aluminium framed doors with 6.3mm thk. toughned glass (glazing to be paid under item no. 13.7) as per specs. Same as item 13.12 but to be fixed masonry openings. (aluminium hollow sectins should be infilled with timber of silver oak). Before erecting the frame coming in contact with the concrete, masonry, plaster or dissimilar metals shall be coated with a coat of Zinc chromate conforming handing over the alluminium work shall be awshed with mild steel solution of non - alkali soap and water.	SQ.M.	40			
13.11	Providing and fixing Powder coated aluminium ventilators all as per specifications (aluminium hollow sections should be infilled with timber of silver oak)	SQ.M.	20			
13.12	Supplying, fitting and fixing 12 mm thick particle boards of approved make and shade at various elevations to aluminium windows, doors & partitions, including supplying rubber gaskets, cost of all materials etc. complete as per specifications.	SQ.M.	240			
13.13	providing, fitting and fixing of pvc panel door with pvc frame .pvc frame DSR NO.9.119..pvc shutter DSR NO.9.120.2 as per specifications.	SQ.M.	5			
14.0	ROLLING SHUTTERS :					

BHEL : PS-WR
TS NO : BHE/PW/PUR/FINSE-CVL/704
PRICE BID-PART-II (VOL-III)

REVISED RATE SCHEDULE FOR MAIN CIVIL PACKAGE (09/10/2009)						
PROJECT: FINCHAA SUGAR-ETHIOPIA						
SL NO	DESCRIPTION	UNIT	QUANTITY	RATE in FIG (INR/ ETHIOPIAN BIRR)	RATE (IN WORDS)	AMOUNT
14.1	Supplying, erecting, assembling, fitting and fixing rolling steel shutters of 1.25mm thk. steel sheets with MS rolled channel frame from approved manufacturers including all fixtures, accessories locking arrangements, electrical motor and electrical wiring for mortar driven, shop coat of approved epoxy primer and two coats of epoxy paint of approved brand and shade after erection with all fittings and fixtures etc all complete as per specifications and drawings. (All the rolling shutters irrespective of their size should have mechanical as well as electrical opening arrangements.)	SQ.M.	50			
15.0	SANITATION / PLUMBING : All the fitting should comply with Ethiopian standard/British standard. Distribution pipe of potable water ,internal and external installation shall generally comply with the requirement of BS 1387.					
15.1	Supplying and erecting HDPE cylindrical and vertical water tank with closed top of approved make of following capacity.					
	a) 1500 LTR	Nos	2			
	b) 2500 LTR	Nos	2			
15.2	Supplying, fitting and fixing heavy cast iron " Roof Drain" pipes at various elevations including shoe bends junctions, sockets, adapters, brackets, hangers, supports etc jointing, caulking prime coat of painting with anticorrosive paint including all materials etc complete as per drawings and specifications.					
	a) 100 mm dia.	R.M.	50			
	b) 150 mm dia.	R.M.	300			

**BHEL : PS-WR
TS NO : BHE/PW/PUR/FINSE-CVL/704
PRICE BID-PART-II (VOL-III)**

REVISED RATE SCHEDULE FOR MAIN CIVIL PACKAGE (09/10/2009)						
PROJECT: FINCHAA SUGAR-ETHIOPIA						
SL NO	DESCRIPTION	UNIT	QUANTITY	RATE in FIG (INR/ ETHIOPIAN BIRR)	RATE (IN WORDS)	AMOUNT
15.3	Similar to item no:-15.2 above supplying fitting and fixing of PVC drain pipes of approved make at various elevations including shoe bends junctions sockets, adapters, brackets, hanger supports etc., jointing with appropriate adhesives, including all materials complete as per drawings and specifications.					
	a) 100 mm dia pipes	R.M.	20			
	b) 150 mm dia pipes	R.M.	20			
15.4	Supplying, fitting and fixing Roof drain heads with high domed gratings at various elevations, including connecting to roof drain pipes, caulking with lead supports / fixing with adhesive for PVC pipes, hangers etc, prime coat of painting with anti - corrosive paint with all materials as per drawings and specifications.					
a)	Heavy duty C.I. Heads					
	i) 100 mm pipe	Nos.	4			
	ii) 150 mm pipe	Nos.	22			
b)	PVC roof drain heads					
	i) 100 mm pipe	Nos.	4			
	ii) 150 mm pipe	Nos.	4			
15.5	Supplying, fitting fixing the following best quality sanitary fixtures at various elevations including all necessary accessories, cutting and making good of concrete / Concrete Block work for concealing all connecting pipes and bends with all materials, painting etc all complete as per specifications and drawings. All fitting and fixtures shall be painted with two coat of enamel paint over a coat of primer.					

BHEL : PS-WR
TS NO : BHE/PW/PUR/FINSE-CVL/704
PRICE BID-PART-II (VOL-III)

REVISED RATE SCHEDULE FOR MAIN CIVIL PACKAGE (09/10/2009)						
PROJECT: FINCHAA SUGAR-ETHIOPIA						
SL NO	DESCRIPTION	UNIT	QUANTITY	RATE in FIG (INR/ ETHIOPIAN BIRR)	RATE (IN WORDS)	AMOUNT
a)	European/Ideal Standard Type water closet of white vitreous china of specified size and pattern including suitable flushing systems complying with BS 5503, 977. WC Pan shall be approved quality and shall bear the mark of the firm manufacturing it. Detail specification of WC pan flushing cistern shall be as per BATCODA 1990 (or latest edition)	NOS	4			
b)	Orissa type water closet of white vitreous china of specified size and pattern including suitable flushing systems complying with BS 5503, 977. WC Pan shall be approved quality and shall bear the mark of the firm manufacturing it. Detail specification of WC pan flushing cistern shall be as per BATCODA 1990 (or latest edition)	Nos.	1			
c)	610 x 410 x 380 mm large flat back urinals with a pair of 250 X 125 mm white ceramic foot rest with concealed hangers and brackets, CP brass spreader for concealed piping work, CP brass waste fittings, 30 mm dia heavy duty bottle trap etc all complete as per specifications.	Nos.	8			
d)	Automatic high level PVC cistern with mosquito proof lid, interior painted with 2 coats of anti corrosive paint complete with loose key CP brass bibcock,15mm CP brass metal tube angle valve of approved make with necessary length of lead inlet pipe complete with C.P. brass union unless otherwise specified in the schedule of the quantities.					
e)	Cistern capacity 5 ltrs.	Nos.	4			
ii)	Cistern capacity 10 ltrs	Nos.	1			
iii)	Cistern capacity 15 ltrs	Nos.	5			

BHEL : PS-WR
TS NO : BHE/PW/PUR/FINSE-CVL/704
PRICE BID-PART-II (VOL-III)

REVISED RATE SCHEDULE FOR MAIN CIVIL PACKAGE (09/10/2009)						
PROJECT: FINCHAA SUGAR-ETHIOPIA						
SL NO	DESCRIPTION	UNIT	QUANTITY	RATE in FIG (INR/ ETHIOPIAN BIRR)	RATE (IN WORDS)	AMOUNT
iv)	White poreclain division plate of size 840 X 300 mm with CP brass screws	Nos.	4			
f)	550 x 400 mm wall hung white glazed stone ware flat back wash basin with provision for tap holes in three locations with supporting brackets,C.P brass 30mm dia waste fittings,heavy duty CP brass bottle trap,one no. 15mm dia long nose C.P brass pillar cock,one number supply connection with 300.mm long,15 mm dia P.V.C pipe with brass nuts at both ends and C.P brass stop cock,a cold water C.P brass pillar tap of approved design and make ,C.P. brass chain and rubber plug and water inlet pipe etc,complete as per drgs and specifications	Nos.	4			
g)	150 x 150 mm recessed white glazed porcelain soap tray.	Nos.	4			
h)	Chromium plated shower set with 100/150 mm dia brass shower rose with rim arm,wall flange,hot/ cold water mixing valves including handle and concealed supply pipe including 600mm long C.P grab bar,bibcock etc, as per specifications all complete.	Nos.	4			
i)	600 x 450 x 6 mm thk bevelled edge mirror of superier glass with necessary fixtures as per specifications complying with Ethiopian standard/British standard.	Nos.	4			
j)	35 litre capacity hot water geyser of approved make.	Nos.	4			
k)	600mmX120mmX4mm thick clear glass shelves with chromium plated brackets, guard rails etc, all complete	Nos.	4			
l)	600 mm long, 20 mm dia and 1.25 mm thick chromium plated brass towel rail with brackets fittings , etc, complete complying with Ethiopian standard/British standard	Nos.	4			

BHEL : PS-WR
TS NO : BHE/PW/PUR/FINSE-CVL/704
PRICE BID-PART-II (VOL-III)

REVISED RATE SCHEDULE FOR MAIN CIVIL PACKAGE (09/10/2009)						
PROJECT: FINCHAA SUGAR-ETHIOPIA						
SL NO	DESCRIPTION	UNIT	QUANTITY	RATE in FIG (INR/ ETHIOPIAN BIRR)	RATE (IN WORDS)	AMOUNT
m)	All Chromium plated standard liquid soap dispenser of approved make with all fittings etc, complete.	Nos.	4			
n)	12 mm dia CP brass ablution tap with all fittings complete.	Nos.	4			
15.6	Supplying, fitting fixing the following best quality Automatic Urinal flush Control System of approved make at various elevations including all necessary accessories, cutting and making good of concrete / Concrete Block / brick work for concealing all connecting pipes and bends with all materials etc all complete as per specifications and drawings.	Nos.	4			
15.7	Supplying, fitting and fixing 100 mm dia inlet and 80/100 mm dia outlet SS floor drain with trap and with screwed or hinged CP brass gratings.	Nos.	4			
15.8	Providing 300 x 300 x 675 mm chamber in 1:4 Concrete Block work 115 mm thick with plain concrete 1:2:4 foundation cement mortar including supplying and fixing 100 mm. dia square mouth gully trap, gratings, CI frame and cover, all complete as per specifications.	Nos.	5			
15.9	Supplying, laying, fitting, fixing and jointing concealed GI pipes for water lines at various elevations pipes underground with all fittings bends, teas, reducers etc. including excavation, backfilling, supports, caulking, chases, grooves, hangers, supports, straps etc. painting as specified all complete as per specification and drawings.					
a)	12 mm dia	R.M.	50			
b)	19mm dia	R.M.	50			
c)	25 mm dia	R.M.	50			

**BHEL : PS-WR
TS NO : BHE/PW/PUR/FINSE-CVL/704
PRICE BID-PART-II (VOL-III)**

REVISED RATE SCHEDULE FOR MAIN CIVIL PACKAGE (09/10/2009)						
PROJECT: FINCHAA SUGAR-ETHIOPIA						
SL NO	DESCRIPTION	UNIT	QUANTITY	RATE in FIG (INR/ ETHIOPIAN BIRR)	RATE (IN WORDS)	AMOUNT
d)	32 mm dia	R.M.	50			
e)	50 mm dia	R.M.	50			
15.10	Supplying fitting and fixing CI heavy duty man hole cover of 50 cm dia of approved brand as per specification	Nos.	10			

BHEL : PS-WR
TS NO : BHE/PW/PUR/FINSE-CVL/704
PRICE BID-PART-II (VOL-III)

REVISED RATE SCHEDULE FOR MAIN CIVIL PACKAGE (09/10/2009)						
PROJECT: FINCHAA SUGAR-ETHIOPIA						
SL NO	DESCRIPTION	UNIT	QUANTITY	RATE in FIG (INR/ ETHIOPIAN BIRR)	RATE (IN WORDS)	AMOUNT
16.0	SURFACE AND UNDERGROUND DRAINS:					
16.1	Supplying and installing of UPVC pipes of following diameter as per specifications and drawing.UPVC (unplasticised Polyvinyl chloride) pipes and fitting for solvent cement weld for foul and surface drainage shall comply with the requirement of BS5481.UPVC pipes and fitting for solvent cement weld for cold water shall comply with the requirement of BS 3505 and BS4346,part 2 respectively.					
a)	100 mm dia	R.M.	20			
b)	150 mm dia	R.M.	100			
c)	250 mm dia	R.M.	50			
16.2	Providing and installing RCC Hume pipes with collars, at all depths including bedding, jointing etc. all complete as per drawing and specifications .Pipes shall conform to relevant Ethiopian standard code/British standard code . They shall be new and perfectly sound free from cracks,cylindrical,straight and of specified nominal diameter. Each pipe shall have one collar. (excavation and backfilling to be measured seperatly under relevant items).					
a)	150 mm	R.M.	50			
b)	200 mm	R.M.	10			
c)	250 mm	R.M.	10			
d)	300 mm	R.M.	50			
e)	450 mm	R.M.	10			
f)	500	R.M.	10			

BHEL : PS-WR
TS NO : BHE/PW/PUR/FINSE-CVL/704
PRICE BID-PART-II (VOL-III)

REVISED RATE SCHEDULE FOR MAIN CIVIL PACKAGE (09/10/2009)						
PROJECT: FINCHAA SUGAR-ETHIOPIA						
SL NO	DESCRIPTION	UNIT	QUANTITY	RATE in FIG (INR/ ETHIOPIAN BIRR)	RATE (IN WORDS)	AMOUNT
g)	600	R.M.	10			
16.3	Supplying, laying, jointing, testing and commissioning of double coated and double wrapped Carbon Steel pipes of the following diameter below GL including all material complete as per drawing and specifications. For all steel/cast iron underground piping necessary wrapping with tar felt coating be given as per Ethiopian/British standards.					
a)	100mm dia (Min. Thickness - 4.5mm)	R.M.	20			
b)	150mm dia (Min. Thickness - 4.8mm)	R.M.	100			
c)	200mm dia (Min. Thickness > 4.8mm)	R.M.	20			
d)	300mm dia (Min. Thickness - 5.6mm)	R.M.	100			
16.4	Supplying, fitting, fixing, drain funnels of following diameters below GL					
a)	150mmdia as per drg. No. 4-38142-00055	Each	10			
b)	250mm dia as per drg. No. 4-38144-00053	Each	10			
17.0	ROADS/PAVING					
17.1	Consolidating subbase before providing stone soling/WBM with road roller including watering, if required to obtain 95% proctor density including making good undulation etc. all complete as per drawing and specifications .	SQ.M.	2,000			

BHEL : PS-WR
TS NO : BHE/PW/PUR/FINSE-CVL/704
PRICE BID-PART-II (VOL-III)

REVISED RATE SCHEDULE FOR MAIN CIVIL PACKAGE (09/10/2009)						
PROJECT: FINCHAA SUGAR-ETHIOPIA						
SL NO	DESCRIPTION	UNIT	QUANTITY	RATE in FIG (INR/ ETHIOPIAN BIRR)	RATE (IN WORDS)	AMOUNT
17.2	Supplying,laying and rolling Stone soling of consolidated thickness 200mm in 2 layers including spreading binding material(sand / morrum) watering and rolling with road roller etc. all complete as per drawings and specifications .Soling should consist of sound and uniform quality material (baslt or other sound stones) conforming to Ethiopian standard code/ British standard.	SQ.M.	2,000			
17.3	Supplying and laying WBM in 150 mm consolidated thickness in two layers with dry and wet rolling etc complete as per drgs and specifications.	SQ.M.	700			
17.4	Providing and laying 75 mm compacted thickness of premixed bituminous carpet (hot process) finish over WBM surface including provision of a tack coat and a seal coat,using bitumen conforming to IS : 73 , preparation of surfaces, rolling etc.complete as per specs.	SQ.M.	700			
17.5	Supplying,laying and setting precast concrete edging blocks 300 x 150 mm (at base) and a min.length of 450 mm (except at curves) in M 20 grade concrete including cutting of trench and packing exterior face of blocks with stone chips and murrum including pointing the joints with CM 1:4 etc. all complete as per drawings and specifications	R.M.	200			
17.6	Supplying, Spreading & filling murrum 150 mm thick and consolidation and preparation of sub base including watering and rolling & compaction with power roller 10-12 T capacity to the required density (95% of proctor density) & upto satisfaction of BHEL	CU.M.	20			
18.0	MISCELLANEOUS ITEMS					
18.1	Supplying and spreading 40mm size stone chips / gravels	CUM	200			
18.2	Supply, fabricating and fixing in position transformer gate / fencing including painting with aluminium paint two coats over suitable primer etc.complete., excavation,concreting and post etc to be measured separately.	SQ.M.	30			

BHEL : PS-WR
TS NO : BHE/PW/PUR/FINSE-CVL/704
PRICE BID-PART-II (VOL-III)

REVISED RATE SCHEDULE FOR MAIN CIVIL PACKAGE (09/10/2009)						
PROJECT: FINCHAA SUGAR-ETHIOPIA						
SL NO	DESCRIPTION	UNIT	QUANTITY	RATE in FIG (INR/ ETHIOPIAN BIRR)	RATE (IN WORDS)	AMOUNT
18.3	Supplying and fixing in positions Anchor Fasteners of following diameters in concrete, including drilling in concrete, driving the anchor fastner, finishing the concrete etc., all complete as per drawings and specifications					
	a) 8 mm	Nos	40			
	b) 10 mm	Nos	50			
	c) 12 mm	Nos	60			
	d) 14 mm	Nos	40			
	e) 16 mm	Nos	30			
	f) 20 mm	Nos	50			
18.4	Supplying and fixing in positions 100 mm wide 22g Aluminium strips of approved make in expansion joints with brass screws including drilling in concrete, all complete as per drawings and specifications	R.M.	100			
18.5	Cutting and drilling holes of the following diametes using diamond cutter drilling machine with all material, labour etc., all complete as per drawings and specifications.					
	a) 100mm dia x 200 mm deep	Nos	20			
	a) 150mmdia x 200 mm deep	Nos	30			
	a) 200mm dia x 200 mm deep	Nos	20			
	a) 250mm dia x 200 mm deep	Nos	20			

BHEL : PS-WR
TS NO : BHE/PW/PUR/FINSE-CVL/704
PRICE BID-PART-II (VOL-III)

REVISED RATE SCHEDULE FOR MAIN CIVIL PACKAGE (09/10/2009)						
PROJECT: FINCHAA SUGAR-ETHIOPIA						
SL NO	DESCRIPTION	UNIT	QUANTITY	RATE in FIG (INR/ ETHIOPIAN BIRR)	RATE (IN WORDS)	AMOUNT
18.6	Providing Anti-termite treatment to building columns, floors, backfill, plinth and junctions of pipes etc with Chloropyrifos emulsifiable concentrates (1%) with cost of material, labour, consumables etc, all complete as per drawings and specifications..The work shall be carried out by a specialist pest control agency approved by employer.The work to be carried out by the specialist firm shall carry a guarantee for satisfactory performance of the treatment for a minimum period of ten (10) years.The treatment shall be carried out generally in accordance with the stipulation laid down by Ethiopian Building Code standard / British Standard.The earth filling immediately under the stone solling (under floors) bottom and side fills of all foundation (expecting foundations) and soil along external perimeter of all buildings shall be chemically treated against termites. The chemicals to be used for the treatment shall be dildrin,aldrin,haptachlor or chlordane conforming to the requirement and concentration laid down in Ethiopian Building Code standard / British Standard.	Sq. m	500			
19.0	FENCING :					
19.1	Supplying and fixing galvanised chain link mesh , both ends bent type,mesh size 50 mm, dia.of mesh wire 4 mm , with 2 nos line wire 4 mm dia. including tying to RCC / GI posts neatly with GI wires including cost of all materials etc.complete.	SQ.M.	50			
19.2	Supplying and fixing barbed wire fencing of approved quality, including tying to RCC / STEEL posts neatly with GI wires including cost of all materials etc.complete.	R.M.	50			

BHEL : PS-WR
TS NO : BHE/PW/PUR/FINSE-CVL/704
PRICE BID-PART-II (VOL-III)

REVISED RATE SCHEDULE FOR MAIN CIVIL PACKAGE (09/10/2009)						
PROJECT: FINCHAA SUGAR-ETHIOPIA						
SL NO	DESCRIPTION	UNIT	QUANTITY	RATE in FIG (INR/ ETHIOPIAN BIRR)	RATE (IN WORDS)	AMOUNT
20.0	DISMANTLING OF STRUCTURE					
20.1	Dismantling at any level of the following items in the existing structures with all labour, tools & plants, including removing the rubbish within a lead of 1Km. as directed by Engineer.					
	a) Concrete (plain)	CU.M.	30			
	b) Concrete (rein forced) including cutting of reinforcement	CU.M.	100			
	c) Brickwork / Concrete Block	CU.M.	20			
	d) Doors, windows, ventilators	SQ.M.	20			
	e) 50 Tk.premix carpet	SQ.M.	20			
	f) Pipe hand rail	R.M.	50			
	g) GI sheetings	SQ.M.	1,200			
	h) Structural steel	M.T.	50			
	i) WBM/soling for roads or paving	SQ.M	50			
	j) Dismantling of false ceiling	SQ.M	50			
	k) stone masonry	CU.M.	50			
21.0	GROUNDING (Earthing mat)					
21.1	Drawing earthing strips from B H E L stores(earthing strips free supply) Laying, cutting , jointing , welding, painting the joints with cold galvanising paint after welding and testing ground conductors including cost of excavation up to 1m, backfilling, galvanising paint , labour, material etc. complete as per drawing and specifications. (All ground conductors will be issued by BHEL free of cost)					

**BHEL : PS-WR
TS NO : BHE/PW/PUR/FINSE-CVL/704
PRICE BID-PART-II (VOL-III)**

REVISED RATE SCHEDULE FOR MAIN CIVIL PACKAGE (09/10/2009)						
PROJECT: FINCHAA SUGAR-ETHIOPIA						
SL NO	DESCRIPTION	UNIT	QUANTITY	RATE in FIG (INR/ ETHIOPIAN BIRR)	RATE (IN WORDS)	AMOUNT
a)	Earthing strip 75 X 10 mm	R.M.	1,000			
b)	Earth risers of 75X10 mm GI strip	R.M.	500			
c)	Test Pit Electrode as per drg. no.:GT57191 construction of masonry chambers with M.S. covers (for test electrodes), filling with sand, charcoal and salt etc. all complete as per drawings and specifications.	Nos.	100			
d)	Pipe Electrode as per drg. no.GT57191 sheet 2.(Ref. specs.).	R.M.	50			
TOTAL VALUE OF PART - A						

BHEL : PS-WR
TS NO : BHE/PW/PUR/FINSE-CVL/704
PRICE BID-PART-II (VOL-III)

REVISED RATE SCHEDULE FOR MAIN CIVIL PACKAGE (09/10/2009)						
PROJECT: FINCHAA SUGAR-ETHIOPIA						
SL NO	DESCRIPTION	UNIT	QUANTITY	RATE in FIG (INR/ ETHIOPIAN BIRR)	RATE (IN WORDS)	AMOUNT
<i>RATE SCHEDULE, PART - B</i>						
<i>SECTION A - CONSTRUCTION OF 2 No. CLOSED SHED ONE WITH OFFICE (60MX15M) & 2 NO. SECURITY CABIN (4M X 3M)AT FINCHA (2X12MW) ETHIOPIA</i>						
	ALL THE ITEM DESCRIPTION SHALL COMPLY WITH ETHIOPIAN STANDARD (BATCODA). IT IS THE RESPONSIBILITY OF BIDDERS TO ARRANGE ETHIOPIAN STANDARD FOR THIER REFERENCE BEFORE QUOTING FOR THIS JOB. NO CLAIM SHALL BE ENTERTAINED BY BHEL AT LATER DATE FOR NOT HAVING KNOWLEDGE OF RELEVANT CODES FOR DIFFERENT ITEMS OF WORK.					
1	EARTH WORK EXCAVATION IN ALL KINDS OF ORDINARY AND HARD SOIL(INCLUDING SLUSHY SOILI) UP TO A DEPTH OF 3.0 M BELOW GROUND LEVEL FOR FOUNDATION COLUMNS, SEPTIC TANK, SOAK PIT, RAMPS, CONCRETE BLOCK CHAMBER OF SIZE (450 X450 X450 MM) & (600 X600 X600MM) ETC, AND STACKING WITHIN A LEAD OF 100 M,WITH NECESSARY SHORING, STRUTTING, TRIMMING AND DRESSING OF SIDES ETC., INCLUDING BAILING / PUMPING OUT OF SURFACE WATER/RAIN WATER/SUB SOIL WATER, CLEARING OF ALL SHRUBS,WEEDS,GRASS AND CUTTING MINOR VEGETATION INCLUDING ROOTS, IF ANY, COMPLETE AS PER DRAWINGS AND SPECIFICATIONS INCLUDING BACKFILING OF EXCAVATED SOIL AS REQUIRED AROUND THE FOUNDATION & IN PLINTH AND UNIFORMLY SPREADING THE SURPLUS ERATH (IF ANY) AROUND THE STORE SHED AND COMPACT IT FOR AREA DEVELOPMENT.					
a)	All kinds of soil (Ordinary and hard soil)	M3	2000			
b)	SAME AS ITEM 1.1 ABOVE, BUT FOR SOFT ROCK/HARD ROCK/SHEET ROCK REQUIRING CHISELING / BLASTING WITH APPROVAL/LICENSE FROM CONCERNED AUTHORITIES FOR BLASTING AS WELL AS TRANSPORTING AND STORAGE OF EXPLOSIVES.	M3	545			
2	PROVIDING & FILLING IN SOAK PIT WITH BRICK BATS/BROKEN CONCRETE BLOCK 40-80MM INCLUDING SAND PACKING ETC. COMPLETE,AS PER STANDARD SPECIFICATION AND AS INSTRUCTED BY BHEL ENGINEER.	M3	8.5			

BHEL : PS-WR
TS NO : BHE/PW/PUR/FINSE-CVL/704
PRICE BID-PART-II (VOL-III)

REVISED RATE SCHEDULE FOR MAIN CIVIL PACKAGE (09/10/2009)						
PROJECT: FINCHAA SUGAR-ETHIOPIA						
SL NO	DESCRIPTION	UNIT	QUANTITY	RATE in FIG (INR/ ETHIOPIAN BIRR)	RATE (IN WORDS)	AMOUNT
3	PROVIDING & FILLING 300MM COMPACTED THICKNESS IN ALL COLUMN FOUNDATION BELOW SOLING,WITH SELECTED CNS EARTH (COHESIVE NON-SWELLING) / MURRAM OBTAINED FROM BORROW PITS OUTSIDE THE BATTERY LIMIT INCLUSIVE OF NECESSARY ROYALTY CHARGES IF ANY IN ETHIOPIA. EACH LAYER OF 150 MM SHALL BE WATERED AND THOROUGHLY CONSOLIDATED WITH ROLLER/MECHANICAL COMPACTOR .	M3	130			
4	PROVIDING AND LAYING SOLING 300 MM THK WITH 60 -90 MM THICK SIZE AND FILLING THE VOIDS WITH HAND BROKEN METAL OF SIZE 40-60 MM SPREADING MURRUM AND COMPACTION MANUALLY OR BY MECHANICAL COMPACTOR INCLUDING WATERING ETC. ALL COMPLETE AS PER DRAWINGS AND SPECIFICATIONS . SOLING SHOULD CONSIST OF SOUND AND UNIFORM QUALITY MATERIAL (BASALT OR OTHER SOUND STONES) CONFORMING TO ETHIOPIAN STANDARD CODE/ BRITISH STANDARD..	M2	1967			
5	PROVIDING AND LAYING OF PLAIN CEMENT(USING OPC- GRADE- 53) CONCRETE OF MIX 1:4:8 USING 40MM & DOWN SIZE HARD BROKEN GRANITE STONE JELLY FOR FOUNDATION, FLOORING, COLUMN, BASE OF CONCRETE BLOCK/BRICK CHAMBER OF SIZE (450 X450 X450 MM) & (600 X600 X600MM) ETC, BELOW GL AND UPTO 1.0M ABOVE GL . INCLUDING SHUTTERING, CURING, CONSOLIDATION OF SUBGRADE WHEREVER REQUIRED. COMPLETE AS PER STANDARD SPECIFICATIONS AND DRAWING AS DIRECTED BY BHEL ENGINEER.	M3	240			
6	PROVIDING AND LAYING RCC OF MIX 1:2:4 WITH MIN CEMENT CONTENT OF 320 KG/M3 (USING OPC GRADE-53) USING 20MM DOWN SIZE HARD BROKEN GRANITE STONE AGGREGATE INCLUDING MECHANICAL MIXING, VIBRATION, CURING, FORM WORK AND CENTERING,MAKING PRE CAST MAN HOLE COVER OF REQUIRED SIZES AS PER DRAWING AND SPECIFICATION BUT EXCLUDING COST OF REINFORCEMENTS , AS DIRECTED BY BHEL ENGINEER	M3	160			
7	PROVIDING AND LAYING DAMP PROOF COURSE 50 MM THICK IN (1:2:4)/ M-15 CEMENT CONCRETE LAYER AND BITUMEN FELT USING CEMENT WITH WATER PROOFING COMPOUND ETC. COMPLETE.	M2	147			

**BHEL : PS-WR
TS NO : BHE/PW/PUR/FINSE-CVL/704
PRICE BID-PART-II (VOL-III)**

REVISED RATE SCHEDULE FOR MAIN CIVIL PACKAGE (09/10/2009)						
PROJECT: FINCHAA SUGAR-ETHIOPIA						
SL NO	DESCRIPTION	UNIT	QUANTITY	RATE in FIG (INR/ ETHIOPIAN BIRR)	RATE (IN WORDS)	AMOUNT
8	SUPPLYING, BENDING, BINDING, TRANSPORTING AND PLACING IN POSITION FOLLOWING TYPES OF HIGH YIELD STRENGTH DEFORMED (HYSD) BARS REINFORCEMENT OF GRADE CONFORMING TO ETHIOPIAN BUILDING CODE STANDARD/BRITISH STANDARD OF ALL DIAMETERS AND AT ALL ELEVATIONS USING APPROVED QUALITY BINDING WIRES AS PER SPECIFICATIONS AND DRAWINGS.ALL BARS ARE TO BE LAPPED BY 50 X DIA OF BAR AND NOT MORE THAN 33% OF THE BAR SHALL HAVE LAPPED JOINTS AT SAME LOCATION. QUOTED RATE SHALL BE INSLUSIVE OF LABORATORY TEST OF REINFORCEMENT BARS AS PER REQUIREMENT OF BHEL/CUSTOMER.	MT	16			
9	PROVIDING CONCRETE HOLLOW BLOCK WORK OF CLASS AA AS PER BATCODA STANDARDS OF ANY THICKNESS IN CM 1:6 (ie :1 CEMENT & 6 COARSE SAND) FOR FOUNDATION, WALL SUPER STRUCTURES, SEPTIC TANK, CHAMBER AT ALL ELEVATIONS AND LEVELS INCLUDING PLASTERING ON BOTH FACES ,RAKING OUT JOINTS (MIN DEPTH OF 10MM) , CURING ,ALL MATERIALS, LABOUR, SCAFFOLDING ETC. COMPLETE , AS PER DRAWING, AS DIRECTED BY BHEL ENGINEER .	M3	481			
10	STRUCTURAL STEEL COMPLYING WITH THE REQUIRMENT OF BS 4360 AND BS 6363 (BLACK STEEL TO BE PRIMED DURING FABRICATION AND SURFACE TREATED AFTER INSTALLATION. HOT DIP GALVANIZED STEEL SHALL COMPLY WITH THE REQUIRMENT OF BS 729). STRUCTURAL USE OF STEEL IN BUILDING SHALL COMPLY WITH BS5950 OR EQUIVALENT. FABRICATION , ERECTION AND APPROVAL OF STEEL STRUCTURES SHALL BE IN COMPLIANCE WITH ETHIOPIAN BUILDING CODE STANDARD/ BRITISH STANDARD. FABRICATION SHALL BE IN ACCORDANCE WITH THE REQUIREMENT OF BS 5950 STANDARD.					

BHEL : PS-WR
TS NO : BHE/PW/PUR/FINSE-CVL/704
PRICE BID-PART-II (VOL-III)

REVISED RATE SCHEDULE FOR MAIN CIVIL PACKAGE (09/10/2009)						
PROJECT: FINCHAA SUGAR-ETHIOPIA						
SL NO	DESCRIPTION	UNIT	QUANTITY	RATE in FIG (INR/ ETHIOPIAN BIRR)	RATE (IN WORDS)	AMOUNT
10(A)	MANUFACTURE, SUPPLY AND ERECTION OF TUBULAR TRUSSES , PURLINS SPACED GENERALLY @ 1.4 M CENTRE TO CENTRE TO SUPPORT ROOFING WITH AC SHEETS AND WIND TIES TO BE PROVIDED ABOVE SHEETS AND PROVIDING AND FIXING BASE PLATES WITH HOLDING DOWN BOLTS ON RCC COLUMNS , GUSSETS, RIBS, PINS, SPLICES ETC. AS REQUIRED INCLUDING TRANSPORT, LOADING, UNLOADING CHARGES FROM FABRICATION SHOP TO SITE ETC. COMPLETE. DRAWING ATTACHED WITH TENDER IS INDICATIVE ONLY & DESIGN HAS TO BE OBTAINED FOR TRUSS BEFORE FABRICATION, DULY APPROVED BY BHEL, INCLUDING COVER OF CONCRETE BLOCK CHAMBER OF SIZE (450 X450 X450 MM) & (600 X600 X600MM), STRUCTURAL STEEL STAGING FOR ERECTION OF PVC O.H.WATER TANK CAP. 1000 LITRES . RATE IS INCLUDING ALL STEEL SECTIONS, FIXING IN POSITION, LABOUR CHARGES AND COST OF RED OXIDE PRIMER AT FACTORY AND TWO COATS OF SYNTHETIC ENAMEL PAINTS (OVER PRIMER COAT OF RED OXIDE) OF APPROVED COLOUR AND QUALITY AT SITE.WHEREVER NECESSARY AS DIRECTED BY BHEL ENGINEER.	MT	30			
11	PROVIDING AND FIXING CORRUGATED GALVANIZED IRON SHEETS OF 22 G FOR ROOFING WITH WIND TIES INCLUDING FASTENING WITH GALVANIZED IRON SCREW AND BOLTS AND LEAD AND BITUMEN WASHERS AS PER STANDARD ETHIOPIAN SPECIFICATION COMPLETE.	M2	2156			
12	PROVIDING AND FIXING FALSE CEILING WITH TEAK WOOD PARTICLE BOARD HALF PERFORATED SHEET 12 MM THICK OF SIZE 600x600 MM PANELS WITH SQUARE EDGES SUPPORTED BY ANODISED ALUMINIUM FRAMES OF TEES 35x23.5x1.5 MM THICK AS MAIN MEMBER AND 19x23.5x1.5 MM TEES AS CROSS SUPPORTING MEMBERS AND WALL ANGLES OF 23.5x23.5x1.5MM. THE MAIN RUNNERS SHALL BE SUSPENDED FROM ROOF AT 1200 MM CENTRE TO CENTRE BY MEANS OF MS RODS WITH GI 'J' THREADED HOOK FOR ADJUSTMENTS. THE CROSS RUNNERS SHALL BE FIXED TO MAIN RUNNER TO FORM A GRID PATTERN OF 600x600MM AND PROVIDING 25 MM WIDE ALUMINIUM STRIP TEES OR MOULDED SECTIONS AT ALL JOINTS. THE RATE SHALL BE INCLUSIVE OF THREE COATS OF WHITE WASHING ON AC PLAIN SHEETS ETC. COMPLETE.	M2	110			

**BHEL : PS-WR
TS NO : BHE/PW/PUR/FINSE-CVL/704
PRICE BID-PART-II (VOL-III)**

REVISED RATE SCHEDULE FOR MAIN CIVIL PACKAGE (09/10/2009)						
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SL NO	DESCRIPTION	UNIT	QUANTITY	RATE in FIG (INR/ ETHIOPIAN BIRR)	RATE (IN WORDS)	AMOUNT
13(A)	MANUFACTURING, SUPPLY AND FIXING OF BEST QUALITY COUNTRY WOOD DOORS COMPRISING OF FRAME 95 X 70MM AND 38/40MM THICK FLUSH SHUTTERS OF SOLID CORE TYPE USING COMMERCIAL PLY INCLUDING HOLD FASTS, WIND APPLIANCES, HANDLES, TOWER BOLTS AND ALDROPS, MORTISE OR SUITABLE LOCKS ETC. AS PER THE STANDARD PRACTICE AND APPLYING TWO COATS OF SYNTHETIC ENAMEL PAINT OF APPROVED SHADE OVER A COAT OF PRIMER .INCLUDING HYDRAULIC DOOR CLOSER (HEAVY DUTY) OF APPROVED BRAND AS DIRECTED BY BHEL ENGINEER.	M2	19			
13(B)	PROVIDING AND FIXING 18 GUAGE M.S. SHEET DOOR WITH FRAME WORK 40 X 40 X 6 MM M.S. ANGLE INCLUDING LOCKING ARRANGEMENTS, HOLD FAST INCLUDING APPLYING ANTICORROSSIVE PRIMER COAT OF RED LEAD PAINT AND 2 COATS OF OIL PAINT COMPLETE. INCLUDING HYDRAULIC DOOR CLOSER (HEAVY DUTY) OF APPROVED BRAND AS DIRECTED BY BHEL ENGINEER.	M2	3.2			

**BHEL : PS-WR
TS NO : BHE/PW/PUR/FINSE-CVL/704
PRICE BID-PART-II (VOL-III)**

REVISED RATE SCHEDULE FOR MAIN CIVIL PACKAGE (09/10/2009)						
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SL NO	DESCRIPTION	UNIT	QUANTITY	RATE in FIG (INR/ ETHIOPIAN BIRR)	RATE (IN WORDS)	AMOUNT
14	SUPPLY, MANUFACTURE AND FIXING IN POSITION OF STEEL / WINDOWS AND VENTILATORS INCLUDING ALUMINIUM PARTITION FRAMES (ALUMINIUM HOLLOW SECTIONS SHOULD BE INFILLED WITH TIMBER OF SILVER OAK) & IRON BARRED (GUARD BAR OF SQUARE SECTION @ 100 MM C/C) AND GLAZED WITH 4MM PLAIN GLASS AS PER STANDARD SPECIFICATIONS, RELEVANT IS CODE AND INSTRUCTIONS OF BHEL ENGINEER. THE COST SHALL BE INCLUSIVE OF ALL ACCESSORIES FITTINGS, HOLD FASTS, PAINTING TWO COATS OF SYNTHETIC ENAMEL PAINT OF APPROVED COLOUR AND QUALITY OVER ONE COAT OF RED OXIDE PRIMER ETC. COMPLETE.	M2	37			
15	PROVIDING AND FIXING CONCRETE/IPS FLOORING 50MM THICK WITH CEMENT CONCRETE 1:2:4 AS PER STANDARD PRACTICE IN PANELS OF SIZE NOT EXCEEDING 2.0x2.0 SQ.M BY PROVIDING, FIXING GLASS STRIPS.INCLUDING NEAT CEMENT FINISH.	M2	1733			
16	SUPPLYING AND LAYING MATT FINISHED CERAMIC TILES FLOORING & SKIRTING/DADO OF APPROVED MAKE, SIZE AND SHADE CONFORMING TO ETHIOPIAN BUILDING CODE /BRITISH STANDARD. INCLUDING PEREPARATION OF BASE LAYING UNDERBED, FINISHING AND ROUNDING CORNERS AND JUNCTIONS, CURING ETC. AS PER MANUFACTURE'S SPECIFICATIONS , COMPLETE AS PER DRAWINGS AND SPECIFICATIONS. AS DIRECTED BY BHEL ENGINEER.	M2	145			

**BHEL : PS-WR
TS NO : BHE/PW/PUR/FINSE-CVL/704
PRICE BID-PART-II (VOL-III)**

REVISED RATE SCHEDULE FOR MAIN CIVIL PACKAGE (09/10/2009)						
PROJECT: FINCHAA SUGAR-ETHIOPIA						
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17	PAINTING: THE PAINT SHALL CONFORM TO RELEVANT ETHIOPIAN BUILDING CODE /BRITISH STANDARD SPECIFICATION. THE MANNER OF TAKING MEASUREMENT WILL BE IN ACCORDANCE WITH ETHIOPIAN BUILDING CODE STANDARD /BRITISH STANDARD					
17(A)	PROVIDING & APPLYING TWO OR THREE COATS OF OIL BOUND DISTEMPER (OBD) OF APPROVED SHADE & MAKE FOR INTERNAL SURFACE OF SHED, OFFICE & TOILET BLOCK ONLY TO OBTAIN A EVEN FINISH AND UNIFORM COLOUR OVER A COAT OF PRIMER AS PER MANUFACTURE RECOMMENDATION INCLUDING COST OF PAINT, SURFACE PREPARATION, SCAFFOLDING ETC, COMPLETE SURFACE PREPARATION SHALL BE DONE BY APPLYING PUTTY/PLASTER OF PARISH INCLUDING COST OF MATERIAL, LABOUR ETC. COMPLETE.	M2	1900			
17(B)	Providing three or more coats of white/colour cement wash to give a smooth and even shade including cleaning & preperation of surfaces scaffolding etc., all complete as per specifications.	M2	1900			
18	MANUFACTURE, SUPPLY AND FIXING OF MS ROLLING SHUTTERS (1.25MM THICK STEEL SHEET)AS PER I.S. SPECIFICATIONS, COMPLETE, MECHANICALLY OPERATED FROM IN AND OUTSIDE BOTH AS INSTRUCTED BY BHEL ENGINEER INCLUDING TWO COATS OF SYNTHETIC ENAMEL PAINT OF APPROVED COLOUR AND QUALITY OVER ONE COAT OF RED OXIDE PRIMER (COST SHALL BE INCLUSIVE OF ALL THE ABOVE COMPLETE).	M2	32			
1	SANITATION / PLUMBING : ALL THE FITTING SHOULD COMPLY WITH ETHIOPIAN STANDARD/BRITISH STANDARD. DISTRIBUTION PIPE OF POTABLE WATER ,INTERNAL AND EXTERNAL INSTALLATION SHALL GENERALLY COMPLY WITH THE REQUIRMENT OF BS 1387.					

BHEL : PS-WR
TS NO : BHE/PW/PUR/FINSE-CVL/704
PRICE BID-PART-II (VOL-III)

REVISED RATE SCHEDULE FOR MAIN CIVIL PACKAGE (09/10/2009)						
PROJECT: FINCHAA SUGAR-ETHIOPIA						
SL NO	DESCRIPTION	UNIT	QUANTITY	RATE in FIG (INR/ ETHIOPIAN BIRR)	RATE (IN WORDS)	AMOUNT
1(A)	<p>PLUMBING & SANITARY</p> <p>SUPPLYING AND FIXING IN POSITION OF 1 NO. WHITE GLAZED VITREOUS CHINA WASH BASIN OF SIZE 550 X 400 MM, 1 NO. EUROPEAN TYPE WATER CLOSET (PATTERN COMPLYING WITH BS 5503,977), 2 NOS. WHITE GLAZED EARTHENWARE FLAT BACK/CORNER TYPE LIPPED FRONT URINALS OF 430MM X 260MM X 350MM URINAL BASIN WITH 5 LITRES WITH AUTOMATIC FLUSHING CISTERN, 1 NO. HIGH CLASS BELGIUM OR SUPERIOR MAKE BEVELLED EDGE MIRROR OF SIZE 600MM X 450MM X 6MM, 1NO.PVC WATER OVERHEAD TANK OF SYNTEX OR ANY APPROVED MAKE OF 1000 LITRE CAPACITY , 2NO. ANODISED ALUMINIUM (1M LONG) TOWEL RODS, 2 NO. LIQUID SOAP DISPENSER, HEAVY DUTY PELMET ROD FOR DOORS AND WINDOWS, 1 NO. WATER PURIFIER AQUA-GUARD OR EQUIVALENT, 18"X24" SIZE STAINLESS STEEL SINK-1NO. INCLUDING ALL TYPE AND SIZE OF GRATINGS,TRAPS, BIB COCKS,STOP COCKS, VALVES(GATE), PIPES (GI/STONE WARE/ASBESTOS CEMENT) OF REQUIRED MATERIALS AND QUANTITY OF APPROVED BRAND, ALL COMPLETE AS DIRECTED BY BHEL ENGINEER.</p>	L.S.				

**BHEL : PS-WR
TS NO : BHE/PW/PUR/FINSE-CVL/704
PRICE BID-PART-II (VOL-III)**

REVISED RATE SCHEDULE FOR MAIN CIVIL PACKAGE (09/10/2009)						
PROJECT: FINCHAA SUGAR-ETHIOPIA						
SL NO	DESCRIPTION	UNIT	QUANTITY	RATE in FIG (INR/ ETHIOPIAN BIRR)	RATE (IN WORDS)	AMOUNT
SECTION B : FOR INTERNAL ELECTRIFICATION WORK OF BHEL SITE 2 NO. CLOSED SHED ONE WITH OFFICE AND SECURITY CABIN AT FINCHAA (2X12MW) ETHIOPIA						
1	<p>WORK SHALL INCLUDE SUPPLYING AND LAYING OF SUITABLE CABLING FROM MAIN SOURCE UPTO CLOSED STORAGE SHED, SUPPLYING AND INSTALLATION OF OUTDOOR INCOMING PANEL FOR INCOMING SUPPLY, FURTHER DISTRIBUTION INSIDE THE SHEDS, SUPPLYING AND INSTALLATION OF LIGHTING PANELS ,INTERNAL WIRING ,TUBELIGHTS FITTINGS, FANS, EXHAUST FANS,PLUG POINTS (5A/15A),SWITCHES AS PER REQUIREMENT ,CALLING BELLS,EARTHING ETC.</p> <p>ALL FITTINGS AND FIXTURES SHALL COMPLY WITH STATUTORY REGULATION AND ELECTRICITY RULES PREVAILING IN ETHIOPIA. AGENCY HAS TO DECIDE THE SIZE OF THE CABLES EXTERNAL AS WELL AS INTERNAL FOR LIGHTING OF SHEDS OF SIZE (60MX15M) FOR THEIR L.S. PRICE. APPROX. DISTANCE OF THE MAIN SOURCE OF SUPPLY FROM STORE COMPLEX MAY BE ASSUMED AS 500M.</p>	L.S.				

BHEL : PS-WR
TS NO : BHE/PW/PUR/FINSE-CVL/704
PRICE BID-PART-II (VOL-III)

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PROJECT: FINCHAA SUGAR-ETHIOPIA						
SL NO	DESCRIPTION	UNIT	QUANTITY	RATE in FIG (INR/ ETHIOPIAN BIRR)	RATE (IN WORDS)	AMOUNT
SECTION C: FOR ROADS, FENCING, DRAINAGE OF OPEN STORAGE AREA AT FINCHA (2X12MW) ETHIOPIA						
1	EXCAVATION FOR ROADWAY, DRAINS AND CULVERTS IN ALL TYPES OF SOILS, HARD ROCK AND SOFT ROCK (MANUALLY OR MECHANICALLY WITHOUT BLASTING) AND STACKING WITHIN A LEAD OF 100 M,WITH NECESSARY SHORING, STRUTTING, TRIMMING AND DRESSING OF SIDES FOR REQUIRED GRADE, CAMBER AND SIDE SLOPES ,SPREADING THE EXCAVATED EARTH UNIFORMLY IN THE SPECIFIED AREA FOR SITE LEVELING ,CONSOLIDATION OF THE SUB-BASE BY ROLLING WITH ROAD ROLLER ETC., INCLUDING BAILING / PUMPING OUT OF SURFACE WATER/RAIN WATER/SUB SOIL WATER, CLEARING OF ALL SHRUBS,WEEDS,GRASS AND CUTTING MINOR VEGETATION , ROOTS, IF ANY, COMPLETE AS PER DRAWINGS AND SPECIFICATIONS.INCLUDING BACKFILING AND REMOVEL OF EXCAVATED SOIL.	M3	2446			
2	SUPPLYING, SPREADING & FILLING MURRUM 300 MM THICK AND CONSOLIDATION AND PREPARATION OF SUB BASE INCLUDING WATERING, COMPACTION AND ROLLING WITH ROAD ROLLER TO THE REQUIRED DENSITY (95% OF PROCTOR DENSITY) & UPTO SATISFACTION OF BHEL	M3	862			
3	SUB GRADE PREPARATION FOR DEVELOPMENT OF OPEN STORAGE YARD: CUTTING,LEVELLING, & DISPOSAL OF GRASS, WILD GROWTH, BUSHES VEGETATIONS AND DISPOSAL AS PER INSTRUCTION WITHIN THE PLANT BOUNDARY WATERING AND ROLLING WITH 10-12 MT CAPACITY ROLLER FOR SUB GRADE PREPARATION BY AVERAGE CUTTING & FILLING OF 200MM THICK AVAILABLE EARTH WITH ALL T&P, LABOURS, MATERIALS ETC. COMPLETE.FOR OPEN STORAGE YARD.	M2	18000			
4	SUPPLYING,LAYING AND ROLLING STONE SOLING OF CONSOLIDATED THICKNESS 230MM IN 2 LAYERS (115 MM THICK EACH LAYER) INCLUDING SPREADING BINDING MATERIAL(SAND / MURRUM) WATERING AND ROLLING WITH ROAD ROLLER ETC. ALL COMPLETE AS PER DRAWINGS AND SPECIFICATIONS .SOLING SHOULD CONSIST OF SOUND AND UNIFORM QUALITY MATERIAL (BASALT OR OTHER SOUND STONES) CONFORMING TO ETHIOPIAN STANDARD CODE/ BRITISH STANDARD.	M2	2872			

BHEL : PS-WR
TS NO : BHE/PW/PUR/FINSE-CVL/704
PRICE BID-PART-II (VOL-III)

REVISED RATE SCHEDULE FOR MAIN CIVIL PACKAGE (09/10/2009)						
PROJECT: FINCHAA SUGAR-ETHIOPIA						
SL NO	DESCRIPTION	UNIT	QUANTITY	RATE in FIG (INR/ ETHIOPIAN BIRR)	RATE (IN WORDS)	AMOUNT
5	PROVIDING 150 MM THICK WATER BOUND MACADAM (WBM) IN TWO LAYERS OF EACH 75 MM , WITH 40MM TO 60MM METAL (STONE AGGREGATE) INCLUDING SUPPLYING AND SPREADING GRAVEL/MURRUM OVER THE SOLING/CONSOLIDATED BASE, COMPACTING THE SAME WITH ROAD ROLLER INCLUDING NECESSARY LABOUR, WATERING, MATERINGS ETC. COMPLETE, ALL AS PER RELEVANT SPECIFICATIONS AND DIRECTIONS OF BHEL ENGINEER (RATE SHALL BE INCLUSIVE OF ALL LABOUR, MATERIALS ETC., COMPLETE).	M3	431			
6	PROVIDING AND LAYING OF PLAIN CEMENT(USING OPC GRADE-53) CONCRETE OF MIX 1:4:8 USING 40MM & DOWN SIZE HARD BROKEN GRANITE STONE JELLY FOR DRAINS,CULVERTS ETC. INCLUDING SHUTTERING, CURING, CONSOLIDATION ETC. COMPLETE AS PER STANDARD SPECIFICATIONS AND AS DIRECTED BY BHEL ENGINEER.	M3	61			
7	PROVIDING CONCRETE HOLLOW BLOCK WORK IN OF ANY THICKNESS CM 1:6 (ie :1 CEMENT & 6 COARSE SAND) USING LOCALLY AVAILABLE BRICKS (DRAINAG ETC) AT ALL LEVELS INCLUDING PLASTERING ,RAKING OUT JOINTS (MIN DEPTH OF 10MM) , CURING ,ALL MATERIALS, LABOUR, SCAFFOLDING ETC. COMPLETE , AS PER DRAWING, AS DIRECTED BY BHEL ENGINEER .	M3	100			
8	PROVIDING AND LAYING RCC (USING OPC GRADE-53) OF MIX 1:2:4 USING 20MM DOWN SIZE HARD BROKEN GRANITE STONE AGGREGATE INCLUDING MECHANICAL MIXING, VIBRATION, CURING, FORM WORK AND CENTERING AS PER DRAWING AND SPECIFICATION BUT EXCLUDING COST OF REINFORCEMENTS , AS DIRECTED BY BHEL ENGINEER .	M3	13			

BHEL : PS-WR
TS NO : BHE/PW/PUR/FINSE-CVL/704
PRICE BID-PART-II (VOL-III)

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PROJECT: FINCHAA SUGAR-ETHIOPIA						
SL NO	DESCRIPTION	UNIT	QUANTITY	RATE in FIG (INR/ ETHIOPIAN BIRR)	RATE (IN WORDS)	AMOUNT
9	SUPPLYING, BENDING, BINDING, TRANSPORTING AND PLACING IN POSITION FOLLOWING TYPES OF HIGH YIELD STRENGTH DEFORMED (HYSD) BARS REINFORCEMENT OF GRADE CONFORMING TO ETHIOPIAN BUILDING CODE STANDARD/BRITISH STANDARD OF ALL DIAMETERS AND AT ALL ELEVATIONS USING APPROVED QUALITY BINDING WIRES AS PER SPECIFICATIONS AND DRAWINGS.ALL BARS ARE TO BE LAPPED BY 50 X DIA OF BAR AND NOT MORE THAN 33% OF THE BAR SHALL HAVE LAPPED JOINTS AT SAME LOCATION. QUOTED RATE SHALL BE INSLUSIVE OF LABORATORY TEST OF REINFORCEMENT BARS AS PER REQUIREMENT OF BHEL/CUSTOMER.	MT	1			
10	PROVIDING AND FIXING BARBED WIRE FENCING AROUND OPEN STORAGE YARD AS PER DRAWING/AS INSTRUCTED BY BHEL ENGINEER , INCLUDING POSTS OF MS ANGLES 50x50x6MM 2.00 M HIGH ABOVE GROUND AND 450MM EMBEDDED IN THE CONCRETE BELOW G.L AS PER STANDARD PRACTICE/AS INSTRUCTED BY BHEL ENGINEER, FIXING THE POSTS WITH FOUNDATION OF SIZE 0.30x0.30x0.45 M DEEP IN PCC OF MIX 1:2:4 ,THE POSTS SHALL BE SPACED AT 3M CENTRES AND STRUTS AT 30M CENTRES AND AT ALL TURNINGS WITH FOUNDATIONS,SUPPLYING AND FIXING GI BARBED WIRES, 10 HORIZONTAL LINES, TWO DIAGONALS BETWEEN POSTS BY MEANS OF GI STAPLES AS PER STANDARD PRACTICE. THE BARBED WIRE SHALL CONFORM TO ETHIOPIAN/BS STANDARD AND BE MADE OF TWO STRANDS OF GALVANISED TWISTED 2.5MM DIA (12.5 GAUGE) STEEL WIRE WITH FOUR POINT BARS. RATE QUOTED SHALL BE INCLUSIVE OF COST OF POSTS, BARBED WIRES, TRANSPORTING, FIXING IN POSITION ETC. INCLUDING COST OF ALL LABOUR AND TWO COATS OF ENAMEL PAINT OF APPROVED SHADE WITH A SHOP COAT OF PRIMER IN ALL STRUCTURAL MEMBERS ETC COMPLETE. EXCAVATION, DISPOSAL OF SURPLUS EARTH, CONCRETE (1:2:4), FORM WORK AND ALL MATERIALS, Contd....	Rm	571.0			
	contd..... RATE SHALL BE PAID SEPERATLY IN RELEVANT ITEMS .					

BHEL : PS-WR
TS NO : BHE/PW/PUR/FINSE-CVL/704
PRICE BID-PART-II (VOL-III)

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SL NO	DESCRIPTION	UNIT	QUANTITY	RATE in FIG (INR/ ETHIOPIAN BIRR)	RATE (IN WORDS)	AMOUNT
11	SUPPLYING & FIXING IN POSITION RCC HUME PIPE OF NP2 (400 MM DIA ,600 MM DIA)WHEREVER DRAIN CROSSES THE ROADS INCLUDING ALIGNING,LEVELLING ETC.PIPES SHALL CONFORM TO RELEVANT ETHIOPIAN STANDARD CODE/BRITISH STANDARD CODE. INCLUDING P.C. COLLAR JOINTS, ENCASEMENT WITH CONCRETE 1:3:6 OF 300 MM DIA , ENCASING,EXCAVATION AND BACKFILLING TO BE MEASURED SEPERATLY UNDER RELEVANT/ RESPECTIVE ITEMS .					
a)	400mm dia	RM	9			
b)	600m dia	RM	13			
12	SUPPLY FABRICATION, AND FIXING IN POSITION OF MS GATES WITH STRUCTURAL/TUBULAR STEEL FRAMES WITH GALVANIZED CHAIN LINK MESH OF APPROVED DESIGN INCLUDING COST OF POSTS, PAINTING TWO COATS BY SYNTHETIC ENAMEL PAINT OF APPROVED COLOUR AND QUALITY OVER ONE COAT OF RED OXIDE PRIMER, COST OF ALL MATERIALS, LABOUR, TRANSPORT ETC. COMPLETE. EXCAVATION , BACKFILLING AND FOUNDATION CONCRETE ,TO BE MEASURED SEPERATLY UNDER RELEVANT/ RESPECTIVE ITEMS .	MT	2			
13	PROVIDING & FIXING WEEP HOLES WITH 75MM DIA. AC PIPES AT 3MC/C ON BOTH SIDES OF DRAIN WALL WITH FILTER MEDIA USING 40MM SIZE STONE GRIT OF SIZE (300X300X300MM)	RM	97			
SECTION D EXTERNAL ILLUMINATION OF OPEN STORAGE YARD AT FINCHA (2X12MW) ETHIOPIA)						
	WORK SHALL CONSIST OF : SUPPLY AND LAYING OF INCOMING CABLE APPROX. 500M FROM MAIN SOURCE, PANELS, BUS BARS, DISTRIBUTION BORAD, ELECTRIC POLES, LUMINARIES ETC. FOR PROPER ILLUMINATION IN OPEN STORAGE YARD OF AREA 18000 SQM. SIZING OF THE CABLES & CAPACITY OF PANELS, NUMBERS OF POLES & LUMINARIES SHALL BE SUITABLY DESIGENED BY CONTRACTOR .	LS				
TOTAL OF PART B (SECTION A+ SECTION B+ SECTION C+ SECTION D)						

BHEL : PS-WR
 TS NO : BHE/PW/PUR/FINSE-CVL/704
 PRICE BID-PART-II (VOL-III)

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SL NO	DESCRIPTION	UNIT	QUANTITY	RATE in FIG (INR/ ETHIOPIAN BIRR)	RATE (IN WORDS	AMOUNT
	Total of PART A					
	Total of PART B (Section A + Section B + Section C + Section D)					
	Grand Total					
	Grand Total in Words (