

Annex 3 – Technical Specifications and Requirements for Construction Works/ Renovation Works in Mundri West, Western Equatoria State, South Sudan.

Date of issue:	15/11/2024
Project title:	CONSTRUCTION WORKS/RENOVATION WORKS – MUNDRI WEST, WESTERN EQUATORIA STATE
Deadline for submission of offers:	09/12/2024 at 11:30 AM
Contracting authority:	Finn Church Aid (FCA), South Sudan Office E-mail: procurement.ssuco@kua.fi

Please see the tender dossier for more information on submission requirements and full list of annexes.

1. Introduction

Finn Church Aid (FCA) is Finland's largest international aid organisation with more than 70 years of experience. We specialise in the world's most fragile contexts and work with the most vulnerable people, regardless of their religious beliefs, ethnic background or political convictions.

FCA South Sudan Country Office implements humanitarian and development project in throughout South Sudan, working in right to quality education, right to livelihoods and right to peace.

For more information in FCA, please visit www.kua.fi.

2. Purpose

The purpose of this tender is to solicit bids from reliable construction companies for renovation works in Mundri West, Western Equatoria State.

3. Scope of work and Lots

S/N	Description of Work	Quantity	Unit	Unit Cost (USD)	Total Cost (USD)	Remarks
ITEM NO.1 - BOQ RENOVATION OF VTC IN MUNDRI EPISCOPAL COMPOUND, MUNDRI WEST- WESTERN EQUATORIAL						
1	Bill of Quantity 1.					
A	Demolition			N/A	N/A	N/A
1.1	Corrugated Iron sheets gauge 28 complete with all fittings, removed and assembled as directed by the supervising engineers.	1.00	Item			
1.2	Timber trusses (tie beams, strut and ties, rafters, purlins etc), removed and assembled as directed by the supervising engineers.	1.00	Item			
1.3	Clear the site of all debris and dispose off to a designated place as instructed by the supervising engineers	1.00	Item			
1.4	Fumigation of structure including excavation of Anthills settlements in on floor base	1.00	Item			
BILL 2	SUPERSTRUCTURE			N/A	N/A	N/A

2.1	Excavate trench for colum trench and column bases 1 meters deep, starting from stripped levels. The rate for excavation shall include upholding sides of excavated areas and keeping the excavated areas free from water.	1.15	m ³			
2.2	Apply concrete (1:3:6) of 600mm wide and 50mm thick as blinding around column bases.	0.03	m ²			
2.3	Supply and fix T12 steel bar reinforcement including bending, hooking, binding wire, cutting spacers and supporting all in - High Tensile ribbed bar reinforcement to B.S. 4661 to columns, column bases.	62.80	Kg			
2.4	Supply and fix sawn formwork to side of columns, column bases, ground beams, and surface slab	3.00	m ²			
2.5	Prepare and apply vibrated in-situ concrete grade 25 (nominal mix 1:2:4, 25N/mm ² at 28 days) for columns, column bases and verandah slab	2.30	m ³			
3	Super Structure	N/A	N/A	N/A	N/A	N/A
3.1	Supply and fix T12 steel bar reinforcement including bending, hooking, binding wire, cutting spacers and supporting all in -High Tensile ribbed bar reinforcement to B.S. 4661 to ring beam.	192.20	Kg			
3.2	Ditto but for columns	131.88	Kgs			
3.3	Prepare and apply vibrated in-situ concrete grade 25 (nominal mix 1:2: 4, 25N/mm ² at 28 days) for ring beam and columns	2.37	m ³			
3.4	Supply and fix sawn formwork to side of columns, ground beams.	19.64	m ²			
3.5	75 x 3mm x 2600mm high RHS post for verandah posts cast in concrete at 1.8m from classroom wall. Completed with undercoat and approved color of high gloss pain	5.00	No			
3.6	200mm thick walling from well burnt bricks for office and store partitions persion including gable wall partitions to beam level in 1:4 cement and sand mix	14.70	m ²			
3.7	200mm Thick brick work of 400mm high above ring beam and gable walling in 1:3 cement and sand mix to wall plate level and 1.5m rise for gable from wall plate level	24.10	m ²			

3.8	Labour and materials in eaves filling on 200mm wall for average height of 300mm	20.00	LM			
4.00	PERMANENT VENTS	N/A	N/A	N/A	N/A	N/A
4.1	Supply and fix clay vents embedded in 1.3 morta mix	1.20	m ²			
4.2	Bat proof gauze and coffee tray wire backing complete with necessary timber framing and beading.	1.40	m ²			
Bill 5.00	Roof Construction: The following 5nos. Timber trusses each spanning 9.6M x 1.5M rise, comprising of well-treated members bolted together to approval as described and hoisted and fixed in position at about 3.20M above floor level. A timber works in hardwood timber preferably mahogany			N/A	N/A	N/A
5.1	50 x 75mm Purlins	101.10	LM			
5.2	50 x 100mm Strut /tie	40.00	LM			
5.3	50 x 100mm Ridge	25.60	LM			
5.4	50 x 150mm Tie beam	51.00	LM			
5.5	50 x 100mm Rafters	92.20	LM			
5.6	75 x 100mm Wall Plate	22.00	LM			
5.7	25 x 225mm Wrot Cypress fascia board	28.00	LM			
(A)	Roof Covering	N/A	N/A	N/A	N/A	N/A
1.1	28 Gauge pre-painted iron roofing sheets fixed with 1 1/2 side corrugation laps and 150mm end laps with and including approved roofing nails or galvanized steel drive screws with plastic washers to manufacturer's instructions.	114.48	m ²			
1.2	28 Gauge plain (pre-coated) roll top ridge capping.	11.00	LM			
(B)	Painting	N/A	N/A	N/A	N/A	N/A
1.1	"Knot, prime, stop and apply three coats of gloss oil paint to wood fascia 200-300mm girth."	28.00	LM			
Bill 6	Fittings and Finishes	N/A	N/A	N/A	N/A	N/A
6.1	Supply and fix 2100mmx1600mm double flanged door with wooden single faced plane, complete with fixing lugs, ironmongery and fittings all primed with one coat of mahogany varnish before fixing including bedding and pointing in cement and sand (1:4)	1.00	No			

	mortar: oiling and adjusting on completion: two varnish paint to clear cover after sanding					
6.2	Ditto but 2100mm x 900mm doors for office and store	2.00	No			
6.3	Apply 15mm first coat of cement and sand (1:4) plaster; and apply 2 coats of under coat to internal wall surfaces	57.80	m ²			
6.4	Apply 20mm thick cement and sand (1:4) rough cast tyrolean plaster with approved colour of weather guard paint to external wall plaster.	56.10	m ²			
6.5	Apply 20mm thick cement and sand (1:4) normal plaster to external verandah walls.	28.40	m ²			
6.6	Blackboard: 4200 x 1200mm high blackboard in cement sand moter mix 1:3 steel floated including position for putting chalks on 4200x100mm wide. concrete duster holder with chalk groove: painted with one undercoat & two coats blackboard paint	1.00	No			
6.7	Scrap, chizzle, fill cracked floor parts with cement grout, and apply 30mm cement screed and finished smoothly including verandah	48.30	m ²			
6.8	Prepare and apply three coats of 1st quality Weather Guard paint of premium quality to external verandah walls.	28.40	m ²			
6.9	Prepare and apply undercoat and three coats of 1st quality emulsion paint to internal wall surfaces	57.00	m ²			
Bill 7	Splash Apron	N/A	N/A	N/A	N/A	N/A
7.01	Excavate trench for splash apron trenches not less than 0.4 meters deep, starting from stripped levels. The rate for excavation shall include upholding sides of excavated areas and keeping the excavated areas free from water.	12.00	m ²			
7.02	Construct 200mm thick solid wall from bricks, bedded and jointed in cement and sand (mix 1:3) mortar	11.30	m ²			
7.03	Prepare and apply vibrated in-situ concrete grade 25 (nominal mix 1:2: 4, 25N/mm ² at 28 days) including BRC, formwork and support timber ensuring a gentle slope of 1:12	0.60	m ³			
	SUB TOTAL COST FOR ITEM 1.					

Item No.2 Extension of classroom Block			N/A	N/A	N/A	N/A
Bill 1	PRELIMINARIES	N/A	N/A	N/A	N/A	
1.01	Mobilization and demobilization of the contractor, equipment and labour.	1.00	Item			
1.02	Water for works not allowed for in measure works	1.00	Item			
1.03	Allow for Site clearance: cut, clear and dump away all the trees, debris and unnecessary materials on completion of works. Cost cover pre and post construction activity	1.00	Item			
2	Earth works and Substructure	N/A	N/A	N/A	N/A	N/A
2.01	Excavate trench for foundation and column bases 1.2 meters deep, starting from stripped levels. Rate for excavation shall include upholding sides of excavated areas and keeping the excavated areas free from water.	13.20	m ³			
2.02	Apply concrete (1:3:6) of 600mm wide and 50mm thick as blinding around the wall area and column bases.	18.00	m ²			
2.03	Construction of 300mm thick stone wall foundations from hard rock but with minimal water absorption level (to be tested); with a 50% safety factor, bedded and jointed in cement and sand (mix 1:4) mortar.	45.00	m ²			
2.04	Supply and ram murrum around foundations and verandah. The murrum shall be compacted in layers. Total thickness of murrum is 200mm per compaction level. Compaction shall be to 98% MDD	19.20	m ³			
2.05	Supply and fix T12 steel bar reinforcement including bending, hooking, binding wire, cutting spacers and supporting all in - High Tensile ribbed bar reinforcement to B.S. 4661 to columns, column bases.	58.90	Kg			
2.06	Supply and fix sawn formwork to side of columns, column bases, ground beams, and surface slab	3.00	m ²			
2.07	Prepare and apply vibrated in-situ concrete grade 25 (nominal mix 1:2:4, 25N/mm ² at 28 days) for columns, column bases.	0.45	m ³			
2.08	Ditto but ground slab	14.70	m ³			
Bill 3	Superstructure	N/A	N/A	N/A	N/A	N/A

3.01	Damp proof course: bituminous felt: bedded in cement mortar (1:3): 300mm laps	30.00	m			
3.02	Construct 200mm walling from well burnt bricks including gable wall partitions to beam level; load bearing min 5.0 N/mm: reinforced with 20-gauge 25mm hoop iron strips laid horizontally every alternate course: bedded and jointed in cement and sand (1:3) mortar.	46.14	m ²			
3.03	Ditto but gable end	5.20	m ²			
3.04	Ditto but 400mm high above beam and eaves for front and side elevations to wall plate	16.00	m ²			
3.05	Supply and fix T12 steel bar reinforcement including bending, hooking, binding wire, cutting spacers and supporting all in -High Tensile ribbed bar reinforcement to B.S. 4661 to ring beam.	169.56	Kg			
3.06	Ditto but columns	125.60	Kg			
3.07	Prepare and apply vibrated in-situ concrete grade 25 (nominal mix 1:2: 4, 25N/mm ² at 28 days) for ring beam and columns	2.22	m ³			
3.08	Supply and fix sawn formwork to side of columns, ground beams.	17.20	m ²			
3.09	75 x 3mm x 2600mm high RHS post for verandah posts. Completed with undercoat and approved color of high gloss pain	5.00	No			
Bill 4	Roof Construction: The following 5nos. Timber trusses each spanning 9.6M x 1.5M rise, comprising of well-treated members bolted together to approval as described and hoisted and fixed in position at about 3.20M above floor level. A timber works in hardwood timber preferably mahogany			N/A	N/A	N/A
4.01	50 x 75mm Purlins	101.10	LM			
4.02	50 x 100mm Strut /tie	40.00	LM			
4.03	50 x 100mm Ridge	25.60	LM			
4.05	50 x 150mm Tie beam	51.00	LM			
4.06	50 x 100mm Rafters	92.20	LM			
4.07	75 x 100mm Wall Plate	22.00	LM			
4.08	25 x 225mm Wrot Cypress fascia board	28.00	LM			
(A)	Roof Covering	N/A	N/A	N/A	N/A	N/A

1.01	28 Gauge pre-painted iron roofing sheets fixed with 1 1/2 side corrugation laps and 150mm end laps with and including approved roofing nails or galvanized steel drive screws with plastic washers to manufacturer's instructions.	114.48	m ²			
1.02	28 Gauge plain (pre-coated) roll top ridge capping.	11.00	LM			
(B)	Painting	N/A	N/A	N/A	N/A	N/A
1.01	"Knot, prime, stop and apply three coats of gloss oil paint to wood fascia 200-300mm girth."	28.00	LM			
Bill 5	Fittings and Finishes	N/A	N/A	N/A	N/A	N/A
5.01	Supply and fix 2100mmx1600mm double flanged door with wooden single faced plane, complete with fixing lugs, ironmongery and fittings all primed with one coat of mahogany varnish before fixing including bedding and pointing in cement and sand (1:4) mortar: oiling and adjusting on completion: two varnish paint to clear cover after sanding	1.00	No			
5.02	Supply and fix 1200 x 1000mm double flange windows. Shutters in dimension 900 x 450mm wide each with provision of a ventilation from Iron bars fixed at 50mm c/c with bat proof gauze and coffee tray wire backing complete with necessary framing and beading. cost include all accessories, and varnish finish.	6.00	No			
5.03	Supply and fix clay vent tiles at gable ends set at 50mm center from ridge cap complete with "Bat proof gauze and coffee tray wire backing complete with necessary timber framing and beading externally."	2.00	Item			
5.04	Apply 15mm first coat of cement and sand (1:4) plaster; 3mm second coat of cement and lime putty (1:5); steel trowelled to internal wall surfaces	56.54	m ²			
5.05	Apply 20mm thick cement and sand (1:4) rough cast Tyrolean plaster with approved colour of weather guard paint to external wall plaster.	51.34	m ²			
5.06	Apply 20mm thick cement and sand (1:4) normal plaster to external verandah walls.	47.04	m ²			

5.07	Blackboard: 4200 x 1200mm high blackboard in cement sand moter mix 1:3 steel floted including position for putting chalks on 4200x100mm wide. concrete duster holder with chalk groove: painted with one undercoat & two coats blackboard paint	1.00	No			
5.08	Ditto but 30mm thick screed, steel trowelled smooth	98.00	m ²			
5.09	Prepare and apply three coats of 1st quality Weather Guard paint of premium quality to external verandah walls.	50.40	m ²			
5.10	Prepare and apply undercoat and three coats of 1st quality emulsion paint to internal wall surfaces	57.00	m ²			
Bill 6	Permanent Vents	N/A	N/A	N/A	N/A	N/A
6.01	Supply and fix clay vents embedded in 1.3 morta mix	1.20	m ²			
6.02	Bat proof gauze and coffee tray wire backing complete with necessary timber framing and beading.	1.40	m ²			
7	Splash Apron	N/A	N/A	N/A	N/A	N/A
7.01	Excavate trench for splash apron trenches not less than 0.5 meters deep, starting from stripped levels. The rate for excavation shall include upholding sides of excavated areas and keeping the excavated areas free from water.	15.05	m ²			
7.02	Construct 200mm thick solid wall from bricks, bedded and jointed in cement and sand (mix 1:3) mortar	11.20	m ²			
7.03	Prepare and apply vibrated in-situ concrete grade 25 (nominal mix 1:2: 4, 25N/mm ² at 28 days) including BRC, formwork and support timber ensuring a gentle slope of 1:12	0.80	m ³			
SUB TOTAL AMOUNT FOR ITEM 2						
ITEM NO. 3 - BOQ FOR TEMPORARY LEARNING STRUCTURE- MUNDRI TVET CENTRE - 1 BLOCK						
1.00	General Preliminaries					
1.1	Allow for mobilization and demobilization inclusive of erecting of temporary structures if necessary and provision of equipment for implementation of works	1.0	L.S			
1.2	Water for works not allowed for in the measured work	1.0	L.S			

1.3	Allow for Site clearance: cut, clear and dump away all the trees, debris and unnecessary materials on completion of works.	1.0	L.S			
2.00	FOUNDATION WORKS	N/A	N/A	N/A	N/A	N/A
2.1	Excavate pad foundation pits minimum 300x300x500mm deep for hoisting Teak poles in dimension 3000x110mm. Note: pad foundation depth should be increased in sandy areas as approved by site supervisor	0.5	m ³			
2.2	Excavate for strip footing foundation commencing existing reduced levels up to a depth not exceeding 200mm, soils to be stored in temporary spoil heaps and used for backfilling of the foundation.	0.9	m ³			
2.3	Return, fill and ram to make up level average thickness less than 100mm, obtained off site, selected gravel rejects around the walls. Load wheel and deposit surplus excavated materials and deposit at distance not less than 50m from site area	1.0	m ³			
3.00	POST ALIGNMENT AND CASTING	N/A	N/A	N/A	N/A	N/A
3.1	Provide for all structural post poles clamped at the base ready to receive concrete mix for main learning space	10.0	Pcs			
3.2	Ditto but for verandah hoisting poles	3.0	Pcs			
3.3	Embed all poles pads in concrete mix design M-15: 1:2:4 and cured for proper setting: A minimum of 300x300x500mm pads excavated to receive main poles, corners and all truss holding poles.	0.6	M ³			
3.4	50mm thick plain insitu concrete class 15N/mm ² well compacted and mechanically vibrated in concrete footing.	0.5	M ³			
3.5	Return the excavated materials all-round the lined wall and do not compact but allow it to consolidate.	1.80	M ³			
4.0	WALLING	N/A	N/A	N/A	N/A	N/A
4.1	Supply and fix hard wood timber as braces to structure using 75 x 50mm well-fixed with 4-inch common nails to casted poles for main structure in 1000mm c/c. Cost should include common nails	40.00	m			

4.2	Ditto but 100 x 50mm for wall plate	34.0	m			
5.00	WALL CLADDING: Provide and fix CGI 28 sheets to cover gable ends above wall plate. Iron sheet cover shall be fixed to timber joists and fixed using galvanized roofing nails, maximum of 2 corrugates c/c. All fitting of the CGI sheets shall be protected from any form of dents. Bamboo poles shall be fixed for both front and gable ends vertically and neatly aligned.			N/A	N/A	N/A
5.01	Side wall cladding, halfway cladding with well-trimmed bamboo aligned to level from 100mm below ground level to 1200mm to window level Costs include common nails	14.4	m ²			
5.02	Ditto but up to wall plate for gable end. Costs include common nails	24.0	m ²			
6	WINDOW COVER	N/A	N/A	N/A	N/A	N/A
6.01	BRC framing squared mesh opening	6.0	Pcs			
7	ROOF STRUCTURE: Traces:	N/A	N/A	N/A	N/A	N/A
7.01	Provide for rafters 100 x 50mm - Hard wood timber	40.0	LM			
7.02	Provide for Tie beam 150 x 50-hardwood timber	48.0	LM			
7.03	Provide for Struts & ties 75 x 50mm Hardwood Timber	40.0	LM			
7.04	Provide for Purlines 75 x 50mm Hard wood timber	60.0	LM			
7.05	Provide for fascia boards	30.0	LM			
7.06	Provide and fix CGI 30 sheets as roof cover. All iron sheets shall be fitted with galvanized roofing screw nails attached with rubber caps, maximum spacing of 2 corrugates to the other to prevent spill offs	30.0	Pcs			
7.07	Provide and fix 30-gauge ridge caps fitted with galvanized Roofing nails attached with rubber caps considering an overlap of 0.20m	10.0	pcs			
7.08	Knot prime and apply one under coat and two coats of gloss paint to fascia board 200-300mm girth	30.0	m			
8	FINISHES	N/A	N/A	N/A	N/A	N/A
8.01	75mm thick plain concrete 20/20mm aggregate finished smoothly with steel float with gradient tending towards door area.	5.4	m ³			
8.02	1.2 x 2m wooden blackboard well fixed with a wooden ledge for duster and chalk	1.0	Pc			
8.03	Provide and fix Door made with CGI 28 sheets cover shutter but fitted with	1.0	No			

	50x75mm hard wood and all its accessories					
SUB TOTAL AMOUNT FOR ITEM NO.3						
ITEM NO. 4 - BOQ FOR CONSTRUCTION OF LATRINES IN MUNDRI WEST TVET CENTRE: GIRLS LATRINE (2 STANCE LATRINE WITH WASHROOM			N/A	N/A	N/A	N/A
1	SUBSTRUCTURE: Rates shall include for supply of all materials plant, labour for proper execution of works and complete installation and testing of installed equipment if any.			N/A	N/A	N/A
1.1	Excavation and Earthwork (Provisional)	N/A	N/A	N/A	N/A	N/A
1.1.1	Clear the site of shrubs and all debris; remove from site as directed	25.00	m ²			
1.1.2	Excavate loose topsoil average depth 200mm from ground level, wheel and deposit on site as directed	40.00	m ²			
1.1.2	Manual-mass excavation for latrine pit not exceeding 4000mm deep starting from reduced level	21.00	m ³			
1.2.3	Keep the excavated areas free of water using pumps and other equipment, apply planking and strutting to uphold the sides of the excavated trenches to prevent the walls from falling.	1.00	Item			
2	Concrete blinding	N/A	N/A	N/A	N/A	N/A
2.1	50mm thick plain insitu concrete class 15N/mm ² well compacted and mechanically vibrated in concrete footing.	0.75	m ³			
3	Footing/steel reinforcement.					
	Provide steel reinforcements 12mm dia standard bars, 6mm dia standard stirrups and 0.1mm dia standard binding wire, used to form the footing and a tie beam at 1500mm depth from the bottom of the pit.			N/A	N/A	N/A
3.01	12mm dia bars	110.50	kgs			
3.02	6mm dia bars ditto	70.20	kgs			
3.03	0.8mm dia wire	15.00	kgs			
4	Wall lining	N/A	N/A	N/A	N/A	N/A
4.01	200mm thickness walling consisting of burnt bricks bedded and jointed in cement sand mortar mix (1:3) laid in header bond with hoop iron ties every three alternative courses	31.50	m ²			
5	Backfilling	N/A	N/A	N/A	N/A	N/A

5.01	Return the excavated materials all-around the lined wall and do not compact but allow it to consolidate.	4.00	m3			
6	Oversite slab: Single mat slab reinforcement with 12mm dia standard bars tied at the spacing of 150mm.			N/A	N/A	N/A
6.01	12mm dia bars	114.30	kgs			
6.02	1.5mm binding wire.	24.70	kgs			
6.03	Provide BRC A142 to absorb the tensile, shear and the compressive stresses in the reinforced concrete and reduce cracks developed during setting of the concrete.	10.50	m ²			
7	Concrete casting					
7.01	100mm thick plain insitu concrete class 20 well compacted in the interior floor surface.	1.50	m ³			
7.02	Wrought formwork to the sides and below the slab	13.76	m ²			
8	Surface treatment					
8.01	Carry out surface treatment of hardcore with antitermites.	11.20	m ²			
9	Damp proof membrane and Damp-Proof Course			N/A	N/A	N/A
9.01	25mm thickness damp proof membrane polythene sheet laid on levelled sand blinded hardcore	11.20	m ²			
10	SUPERSTRUCTURE					
10.1	Wallings					
10.1.1	25mm thick damp proof membrane polythene cut into 250mm strip laid on the walling area to receive mortar and concrete block.	14.40	m			
10.2	External & Internal walls	N/A	N/A	N/A	N/A	N/A
10.2.1	200mm thick external walling consisting of burnt bricks bedded and jointed in cement-sand mortar mix (1:4).	28.88	m ²			
10.3	Overbeam: External & internal walling	N/A	N/A	N/A	N/A	N/A
10.3.1	200mm thick external walling consisting of burnt bricks bedded and jointed in cement-sand mortar mix (1:3).	3.9	m ²			
10.4	Roofing	N/A	N/A	N/A	N/A	N/A
10.4.1	Construction of trusses and including provision of Iron sheet G28	10.5	m ²			
10.4.2	Provide UPVC 9mm thick and 300mm width fascia board	14.5	m			

11	Wall finishes	N/A	N/A	N/A	N/A	N/A
11.1	<i>Floor surfaces</i>	N/A	N/A	N/A	N/A	N/A
11.1.1	Cement screed finishes on the floor using steel float	8.1	m ²			
11.2	<i>External and internal wall surfaces</i>	N/A	N/A	N/A	N/A	N/A
11.2.1	15mm thick cement sand rendering on the blocks, with steel troweled finish and rough cast finish to a height of 1.5m from the ground	47.1	m ²			
11.3	<i>Finishes for the dressing room & the external walls</i>	N/A	N/A	N/A	N/A	N/A
11.3.1	Prepare the internal and external wall surface smooth to receive paint. Apply three coats of primer. And two coats of weather guard paint. Color approved by supervisor	27.8	m ²			
11.3.2	Apply 20mm thick cement and sand (1:4) rough cast tyrolean plaster with approved colour of weather guard paint to external wall plaster.	101.74	m ²			
12	Fittings: Doors	N/A	N/A	N/A	N/A	N/A
12.1.1	Fabricate mild steel plate 1.5mm thickness for shutters, door frames 135x45x1.5mm and paint with 4-6 coats of oil paint to prevent it from rusting	2.0	No			
12.1.2	Fabricate grilled door fix with all accessories at entrance of walkways	1.0	No			
12.2	Vents	N/A	N/A	N/A	N/A	N/A
12.2.1	For the louvers, provide welded vents made of flat bars 1.5mm and painted to prevent it from rusting.	2.0	No			
13	Ramp and splash Apron	N/A	N/A	N/A	N/A	N/A
13.1	Excavate trench for foundation trenches not less than 0.6 meters deep, starting from stripped levels. The rate for excavation shall include upholding sides of excavated areas and keeping the excavated areas free from water.	1.6	m ³			
13.2	Apply concrete (1:3:6) of 600mm wide and 50mm thick as blinding around the wall area and column bases.	16.20	m ²			
13.3	Construct 200mm thick solid wall from bricks, bedded and jointed in cement and sand (mix 1:3) mortar	1.8	m ²			
13.4	Return fills in and ram murrum around foundations and ramp area. The murrum shall be compacted in layers.	0.73	m ³			

	Total thickness of marram is 200mm per compaction level. Compaction shall be to 98% MDD					
13.5	Prepare and apply vibrated in-situ concrete grade 25 (nominal mix 1:2: 4, 25N/mm ² at 28 days) including BRC, formwork and support timber ensuring a gentle slope of 1:12 for ramp and splash apron	0.37	m ³			
SUB TOTAL AMOUNT FOR ITEMS NO. 4						
Item No. 5 - Bill of quantity for the construction of Mundri VTC - Chain link fence fixed to teak Poles						
Bill No 1	EXCAVATIONS AND EARTHWORKS					
	Disposal of surplus soil as directed & keeping all excavations free from water unless otherwise measured separately. Any additional excavation for working space.	1	Item			
1.1	Mobilization and Demobilization of personnel and equipment to and from the site	1	Item			
1.2	Clearing and preparation of the site including removing of tree plunks and damaged old fencing posts, piling and removal of topsoil up to a depth of 150mm for fence area and disposed off as directed.	1	LS			
1.3	Excavation of 300mm diameter by 400mm deep from strip level to receive 3000 mm teak poles and cast insitu	30.24	m ³			
1.4	Excavation of 200mm by 200mm deep in base pit for chain-link strip foundation.	50	m ³			
Bill 2	CONCRETE WORKS					
(a)	Rate shall include for form work depositing, handling, hoisting into position, vibrating, curing etc. and making good after removal of formwork etc.	N/A	Note	N/A	N/A	N/A
(b)	Reinforcements are paid separately unless otherwise specified in the item	N/A	Note	N/A	N/A	N/A
2.1	In Situ Concrete	N/A	N/A	N/A	N/A	N/A
2.1.1	Prepare and apply Grade.20 concrete (nominal mix of 1:1:5:3, 25N/mm ² at 28 days) as specified to the bases of poles	24.192	m ³			
2.2	Formwork as specified: to	N/A	N/A	N/A	N/A	N/A

2.2.1	Ditto: for footing	80	m ²			
BILL NO.3: FENCE COVER AND REINFORCEMENT				N/A	N/A	N/A
3.1.1	Rate to include for supplying, cleaning, cutting, bending, placing and the provision of all necessary temporary fixings and supports etc. including binding wires, bends, hooks, tying wires.					
3.1.2	Supply and fix 110mm by 3000mm tall teak poles, including 6-inch extension nailing at the bottom, cast insitu with concrete(m/s) mix 1:2:4, the cost to include, transporting, cutting, burning and u-nails for tension wire and fixing of chain link	145	No			
3.1.3	Ditto: Corner end and straining posts to be welded	10	No			
3.1.4	Ditto: Every twenty posts both sides	20	No			
3.2	Chain Link	N/A	N/A	N/A	N/A	N/A
3.2.1	2000mm high gauge 12.5 galvanized steel chain-link steel mesh stretched and tightly tied to the tension wire(m/s) with and including galvanized steel binding wire. The bottom side to have 25mm depth of benching into the concrete and top side end to be properly tied up.	20	Pcs			
3.2.2	Galvanized 2mm plain tension wire (to use as tying wire). Costs inc Binding wire	4	Pcs			
3.2.3	Supply and fix 2000mm by 1200mm wide gate from hard wood timber frame and shutter covered with a plane iron sheet. Cost includes common nails, and all accessories	1	No			
Total amount for Item No.5						
Grand Total Amount for All Items Quoted						

Signature & stamp:

Signed by:

NB. Attachments – Please check carefully before submitting your tender that you have prepared all the documents required in the instructions to Tenders article “Documents comprising the tender”.