

# **BILL OF QUANTITIES**

**OUTDOOR VOLLEYBALL GROUND**

**CLIENT**

**SECRETARIAT OF HULHUDHELI COUNCIL**

**PROJECT : CONSTRUCTION OF OUTDOOR VOLLEY COURT**

<b>Item</b>	<b>Description</b>	<b>Qty</b>	<b>Unit</b>	<b>Rate</b>	<b>Amount</b>
<b>BILL No: 01</b>					
<b><u>PRELIMINARIES</u></b>					
	<p><b><u>GENERAL NOTES</u></b></p> <p><u>Abbreviations</u>                      m - metre                      no - numbers                      m - metre                      incl - including                      mm - millimetre                      dia - diameter                      SS - Stainless Steel                      GI - Galvanised Iron</p>				
<b>1.1</b>	<p><b><u>SITE MANAGEMENT COSTS</u></b></p> <p>(a) Allow for all on and off site management cost including costs of foreman and assistants, temporary services, telephone, fax, hoardings, fences, crane/concrete pump, machinaries and similar items.</p>	1.00	item		
<b>1.2</b>	<p><b><u>SITE SAFETY / SECURITIES</u></b></p> <p>(a) Allow lump sum for health and safety measures for labor and contractor's staff.</p> <p>(b) Allow for erecting and maintaining of temporary <b>scaffoldings</b>, supports, platforms and climbing stairs and remove on completion of the Works including temporary re-erections if required.</p>	1.00	item		
<b>1.3</b>	<p><b><u>CLEANING UPON COMPLETION</u></b></p> <p>(a) Allow for clean-up of completed works and site daily and upon completion.</p>	1.00	item		
<p><b>BILL No: 01 - PRELIMINARIES</b></p> <p><b>TOTAL OF BILL No: 01 - Carried over to summary</b></p>					

Item	Description	Qty	Unit	Rate	Amount
<b>BILL No: 02</b>					
<b><u>EARTH WORKS</u></b>					
<b>2.1</b>	<b><u>SITE CLEARING</u></b> (a) Demolition, leveling and cleaning, waste materials away from the site.	1.00	item		
<b>2.2</b>	<b><u>EXCAVATION</u></b> (a) Note: Excavation quantities are measured to the faces of concrete members. Rates shall include for all additional excavation required to place the formwork, dewatering and others for the required days.				
2.2.1	Excavation for foundations	11.86	m <sup>3</sup>		
<b>2.3</b>	<b><u>DAMP PROOFING</u></b> (a) Rates shall include for: dressing around and sealing to avoid all penetrations				
2.3.1	Polythene damp proof membrane laid on compacted soil to receive ground floor	1.00	item		
<b>2.4</b>	<b><u>WATER PROOFING</u></b> (a) Apply 2 coats of Bituminous paint or similar on all concrete surfaces below ground level in accordance with manufacturer's instructions				
2.4.1	All structure below ground	115.13	m <sup>2</sup>		
<b>2.5</b>	<b><u>EARTH FILLING</u></b> (a) Rates shall include for levelling, grading, trimming and compacting.				
2.5.1	Back filling	3.73	m <sup>3</sup>		
2.5.2	50mm thick sand blinding layer on pitch area	630.00	m <sup>2</sup>		
2.5.3	200mm thick crushed stone subbase	630.00	m <sup>2</sup>		
2.5.4	50mm thick sand blinding layer on top of the subbase	630.00	m <sup>2</sup>		
<b>BILL No: 02 - EARTH WORKS</b>					
<b>TOTAL OF BILL No: 02 - Carried over to summary</b>					

Item	Description	Qty	Unit	Rate	Amount
<b>BILL No: 03</b>					
<b><u>CONCRETE</u></b>					
	(a) Rates shall include for: placing in position; making good after removal of formwork and casting in all required items; additional concrete required to conform to structural and excavated tolerances.				
	(b) Rates shall include supply of all formwork item including form oil, timber, plywood, nails etc.				
	(c) Mix ratio for reinforced concrete shall be 1:2:3 (20mm crushed aggregates) and lean concrete shall be 1:2:4 (20mm Crushed aggregates) by volume.				
<b>3.1 <u>LEAN CONCRETE</u></b>					
	(a) Quantity is measured to the edges of concrete members. Rates shall be inclusive of any additional concrete required to place the formwork.				
3.1.1	50mm thick lean concrete to bottom of all concrete base	7.10	m <sup>3</sup>		
<b>3.2 <u>REINFORCED CONCRETE</u></b>					
	In-situ reinforced concrete to:				
3.2.1	Concrete footings	1.95	m <sup>3</sup>		
3.2.2	Column	1.31	m <sup>3</sup>		
3.2.3	Foundation Beam	4.02	m <sup>3</sup>		
<b>3.3 <u>FORMWORK</u></b>					
	(a) Rates shall include for: all necessary boarding, supports, erecting, framing, temporary cambering, cutting, perforations for reinforcing bars, bolts, straps, ties, hangers, pipes and removal of formwork.				
3.3.1	Concrete footings	22.38	m <sup>2</sup>		
3.3.2	Column	32.76	m <sup>2</sup>		
3.3.3	Foundation beam	27.00	m <sup>2</sup>		
<b>3.4 <u>REINFORCEMENT</u></b>					
	(a) Rates shall include for: cleaning, fabrication, placing, the provision for all necessary temporary fixings and supports including tie wire and chair supports, laps, distribution bars and wastage.				
	(b) All reinforcing bars shall be provide as per the detailed drawings.				
	(c) All reinforcing bars except 6mm dia bars shall be high strength deformed bars				
	(d) The exact length exclusive of laps are given. The rates shall take into account laps and any wastage.				
3.4.1	Concrete footings Light Post				
	T16	99.60	m		
	T10	265.60	m		
	R6	70.56	m		
3.4.2	Columns				
	T10	235.20	m		
	4T10	144.40	m		
	R6	252.00	m		
3.4.3	Concrete footings Net Post				
	T10	16.56	m		
3.4.4	Foundation Beam				
	T10	346.00	m		
	R6	138.50	m		
<b>BILL No: 03 - CONCRETE</b>					
<b>TOTAL OF BILL No: 03 - Carried over to summary</b>					

Item	Description	Qty	Unit	Rate	Amount
<b>BILL No: 04</b>					
<b><u>METAL WORKS</u></b>					
	(a) Rates shall include for: all fabrication work, welding, marking, drilling for bolts including those securing timbers, steel plates, bolts, nuts and any type of washer, riveted work, counter sinking and tapping for bolts or machine screws.				
	(b) Rates shall include for all painting and finishing. All paints shall be approved by the Engineer for colour, quality and type. All painting work shall be carried out in accordance with the paint manufacturer's specifications unless otherwise directed by the Engineer.				
	(c) All cutting and welded joints should painted with RedOxide. All pipes, gate, and metal frame sholud be painted after metal primer with RedOxide.				
	(d) Rates shall include for fabrication and erection of temporary supports and fixing into position				
<b>4.1</b>	<b><u>PVC FENCING</u></b>				
	Boundary fencing with PVC coated chain link fencing net (8 guage), with medium duty GI pipe supporting frame and concrete footings as per design drawings including earthwork etc all complete as per the directions of Engineer-in-charge.				
4.1.1	PVC fence	300.00	m <sup>2</sup>		
4.1.2	50mm GI pipe vertical members	160.00	m		
4.1.3	75mm GI pipe vertical net posts	6.60	m		
4.1.4	38mm GI pipe horizontal members	513.00	m		
<b>4.2</b>	<b><u>DOORS AND WINDOWS</u></b>				
	Supplying all materials and labour and fabricating swing type Gate (double leafed) with medium duty GI pipes & PVC coated chain link fencing net (50mm x 50mm mesh size) as per design drawings including 2 nr's of hinges per leaf & locking arrangement etc all complete of the following size as per directions of Engineer-in-charge.				
4.2.1	G1 Entrance Gate	2.00	nos		
<b>4.3</b>	<b><u>LIGHTING POLES</u></b>				
	Supply and fixing of Gi pipe single arm lighting pole with hot dip galvanized, smooth finish as described.				
4.3.1	Lighting pole as per drawing	4.00	nos		

Item	Description	Qty	Unit	Rate	Amount
<b>4.4</b>	<b><u>TURF INSTALLATIONS</u></b> Supply and installation of infilled artificial grass with manufactures instructions and Allow for infill materials which are silica sand and rubber granules as described <b><u>Turf Specification (ISO Standard or equivalent)</u></b> Dtex: 9600 Pile Height: 20 mm Stitches./m: 310s/m (density: 32,500/sqm) Color: Red/Green/Blue Gauge: 3/8 inch Grassy Yam: Fabrillated PE Backing: PP+Net & SBR Latex Silica Sand: 09kg/sqm				
4.4.1	Turf area (30.4/21.4m) (turf yarn size 20mm)	650.56	m <sup>2</sup>		
4.4.2	Adhesive Pu bi-component	25.00	Set		
4.4.3	Seaming Tape (30cm wide)	800.00	m		
4.4.4	Silica Sand for Infill (0.2-1.0mm) (washed dried cleaned and processed)	5.86	Tons		
4.4.5	Marking the court as per drawings as specs.	1	item		
<b>BILL No: 04 - METAL WORKS</b>					
<b>TOTAL OF BILL No: 04 - Carried over to summary</b>					

Item	Description	Qty	Unit	Rate	Amount
<b>BILL No: 05</b>					
<b><u>ELECTRICAL &amp; SPECIFIC INSTALLATIONS</u></b>					
	(a) Rates shall include for: screws, nails, bolts, nuts, standard cable fixing or supporting clips, brackets, straps, rivets, plugs and all incidental accessories				
	(b) Rates for work in trench shall include for: excavation, maintaining faces of excavations, backfilling, compaction, appropriate cable covers, warning tape and disposal of surplus spoil				
	(c) Rates for electrical conduits, fittings, warning tape equipment and similar items shall include for: all fixings to various building surfaces				
	(d) Light end and switch end of wiring together measured as one point				
	(e) A point wiring for power points is measured as one point for each socket outlet; other end of wire is not included in the quantity.				
	(f) Rates shall include for supply and complete installation				
	(g) Single phase power supply.				
<b>5.1 <u>ELECTRICAL BOARDS</u></b>					
	Complete installation, including for all connections, earthing, painting, testing and similar of:				
	Single phase main panel board with connections from the mains including meter, cut-off fuse and other accessories to be located in the panel room at ground floor to electrical engineers specification				
5.1.1	Main distribution board	1.00	nos		
5.1.2	Electricity meters	1.00	nos		
<b>5.2 <u>ELECTRICAL WIRING</u></b>					
	Electrical wiring with copper conductor cable in conduits in walls and concrete as per government regulations including necessary D-boards at each level.				
5.2.1	Wiring to Lighting	16.00	points		
5.2.2	Wiring to D/B	1.00	item		
5.2.3	Connected to main with 16sqm cable	1.00	item		
<b>5.3 <u>CABLE LAYING</u></b>					
	Supply and laying of 10 sqmm cable with GI 4.5mm thick condute and avarage depth is - 600mm to 650mm as described				
5.3.1	10sqmm 4 core caba with hard condute on all light post to main distribution boad	1.00	item		

Item	Description	Qty	Unit	Rate	Amount
5.4	<p><b><u>LIGHTING, POWER POINTS</u></b></p> <p>All lights shall be of 'Cree' or equivalent brand or equivalent,led tube light shall be pure white all switches, sockets etc. shall be 'Legrand' brand or equivalent</p> <p><b><u>Light Specification</u></b>  Item Type:300W LED Floodlight  LED Type: Epistar/Bridgelux/Cree  Power:300W  Lamp Luminous Flux:7000-9000lm  Lamp Luminous Efficiency: 70-90lm/W  CRI: ≥75Ra  Color Temperature: 6000~7000K(CW)  Beam Angle: 120-140 degree  IP Grade: IP65  Input Voltage: AC85-265V  Frequency: 50/60HZ  Lamp Body Material: Aluminum Alloy  Life Time: ≥35000hours  Working Temperature: -20°C~+45°C  Shell Color: Grey or Black  Dimension: 290*290*90mm  Appliance Class: Class I  Certification: CE, RoHS, FCC  Warranty: 2 years</p>				
5.4.1	Led flood light (300watts)	16.00	nos		
5.4.2	Switch( manual control)	8.00	nos		
<b>BILL No: 05 - ELECTRICAL &amp; SPECIFIC INSTALLATIONS</b>					
<b>TOTAL OF BILL No: 05- Carried over to summary</b>					



Item	Description	Qty	Unit	Rate	Amount
<b>BILL No: 06</b>					
<b><u>FIXTURE AND EQUIPMENTS</u></b>					
	(a) Contractor shall get approval from the Consultant for all fittings before installation. The fixture and equipment shall be installed according the instruction manuals. Rates shall include for: Screws, nails, bolts, nuts, standard cable fixing or supporting clips, brackets, straps, rivets, plugs and all incidental accessories.				
	<b>6.1 <u>OUTDOOR BENCH</u></b> Supply and deliver to door step, GI bench as per drawings. Rates shall include fabrication painting and completion of all necessary works.				
6.1.1	Steel bench	4.00	nos		
	<b>6.2 <u>Outdoor Volleyball Post</u></b> FIVB approved outdoor use Under ground L300mm Inner post : 6.2.1 $\Phi$ 76.3mm Outer post : $\Phi$ 85.0mm 33kg/pair Internal bevel gear system for fine height adjustment Aluminium made Dust/Water/Rust proof design complete				
6.2.1		1	set		
	<b>6.3 <u>Safety Pads</u></b> FIVB approved outdoor use H1700mm 5kg/pair Urethane foam 6.3.1 covered with tarpaulins Easy attach/detach with Velcro tapes Dust/Water/Rust proof design complete				
6.3.1		1	set		
	<b>6.4 <u>Volleyball Nets</u></b> FIVB approved polyethylene net H1000 x L8500mm with 6.4.1 Technora cable , complete				
6.4.1		1	nos		
	<b>6.5 <u>Refree Stand</u></b> 6.5.1 Referee stand with padding as per drawings as specs.				
6.5.1		1	nos		
<b>BILL No: 06 - FIXTURE AND EQUIPMENTS</b>					
<b>TOTAL OF BILL No: 06- Carried over to summary</b>					

## SUMMARY

<b>1.0</b>	<b>PRELIMINARIES</b>	
<b>2.0</b>	<b>EARTH WORKS</b>	
<b>3.0</b>	<b>CONCRETE</b>	
<b>4.0</b>	<b>METAL WORKS</b>	
<b>5.0</b>	<b>ELECTRICAL AND SPECIFIC INSTALLATIONS</b>	
<b>6.0</b>	<b>FIXTURE AND EQUIPMENTS</b>	
<b>TOTAL</b>		
<b>ADD GST 8%</b>		
<b>TOTAL COST IN MRF</b>		
<b>DURATION IN DAYS</b>		