**Date: 11th OCTOBER 2024**

**BOQ FOR CONSTRUCTION OF THREE WATER KIOSK ONE COMMUNAL WATER POINT AND TWO LIVESTOCK TROUGHS AT NAIBOR**

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| **TENDER REF NO** | **ITEM DESCRIPTION** | **DELIVERY LOCATION** |
| HFHK/ADH/02/2024 | **CONSTRUCTION OF THREE WATER KIOSK ONE COMMUNAL WATER POINT AND TWO LIVESTOCK TROUGHS AT NAIBOR** | Project name: rugutu namuki-naibor water distribution points  Project location: naibor village, laikipia north sub-county, laikipia county  (approximately 20km from nanyuki town)" |

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| **TENTATIVE BILLS OF QUANTITIES FOR THE DEVELOPMENT OF RUGUTU NAMUKI-NAIBOR  WATER DISTRIBUTION POINTS** | | | | | |
| **ESTIMATES FOR I NO.WATER KIOSK (OF UPTO 2.6M BY 2.6M AND UPTO 1 FOOT ABOVE THE GROUND LEVEL) WITH 10,000L PLASTIC WATER TANKS INSTALLED ON TOP -See design drawings attached** | | | | | |
| **1.00** | **Excavations** |  |  |  |  |
| A | General excavation to remove top soil to an average depth of 250mm | m2 | 17 |  | - |
| B | Excavation for column footing depth to a minimum depth 1200mm | m3 | 6 |  | - |
| C | Excavation for front area depth not exceeding 250mm | m3 | 5 |  | - |
| D | Cart away surplus excavated material & deposit at recommended area | m3 | 3 |  | - |
| E | 300mm thick approved hard-core, well compacted in layers not exceeding 150mm and blinded using 50mm murrum/quarry dust | m2 | 11 |  | - |
| **2** | **Masonry Work** |  |  |  | **-** |
| A | 150 x225X 450mm natural stone to walls to superstructures walling in 1:3 sand/cement mortar finished with steel finished on one side. Rate to included mild all reinforcement at every course | m2 | 16 |  | - |
| B | 150 x225 X 450 natural stone to walls to Substructures walling in 1:3 sand/cement mortar. Rate to included mild all reinforcement at every course | m2 | 18 |  | - |
| C | 150mm wide DPM to walls | m | 12 |  | - |
| **3** | **Concrete Work** |  |  |  | **-** |
| A | Concrete grade 15/20 - 400 mm thick Plinth | m3 | 0 |  | - |
| B | Concrete grade 15/20 - 100mm thick slanting front area | m3 | 1 |  | - |
| C | Reinforced concrete grade 25/20 - 125mm thick floor slab | m3 | 1 |  | - |
| D | Reinforced concrete grade 25/20 - 450 X 250mm footing | m3 | 1 |  | - |
| E | Reinforced concrete grade 25/20 - 1050 X 1050\* 300mm column footing | m3 | 1 |  | - |
| F | Reinforced concrete grade 25/20 - 300 X 200mm columns | m3 | 1 |  | - |
|  | Reinforced concrete grade 25/20 - 450 X 300mm Ground and roof beams | m3 | 3 |  | - |
| G | Reinforced concrete grade 25/20 in roof slab | m3 | 1 |  | - |
| **4** | **Concrete Ancillaries** |  |  |  | **-** |
| A | Provide, cut and fix in position sawn timber formwork and probs or equivalent for all concrete works | LS | 1 |  | - |
| **5** | **Reinforcement: Steel reinforcement cut, bend & placed in position, unit price to include cutting, bending & placing in position with binding wire and concrete seats** |  |  |  | **-** |
| A | a) Mesh 142 mild steel reinforcement mesh (0.40kg/m2) in foundation wall | m2 | 15 |  | - |
| B | b) 10mm diameter high tensile steel (0.62kg/m2) in foundation wall | m | 45 |  | - |
| C | a) 8mm diameter mild steel (0.40kg/m) in foundation wall | m | 130 |  | - |
| D | b) 12mm diameter high tensile steel in roof slab | m | 182 |  | - |
| E | c) 8mm diameter mild steel (0.40kg/m) in roof slab | m | 110 |  | - |
| F | d) 10mm diameter high tensile steel (0.89kg/m) in column footing | m | 45 |  | - |
| G | e) 12mm diameter high tensile steel (0.89kg/m) in columns | m | 40 |  | - |
| H | f) 10 mm diameter mild steel (0.40kg/m) in columns | m | 35 |  | - |
| **6** | **Fittings and Fixtures** |  |  |  | **-** |
| A | 2000 X 1000 steel door including locks and hinges to details | No | 1 |  | - |
| B | 1000 X 1000 steel swing window including locks and hinges to details | No | 1 |  | - |
| **7** | **Pipes and Fittings: All pipes to be Galvanised Iron with Screw with adequate jute hemp thread for fixation of fittings** |  |  |  | **-** |
| A | 50mm to 25mm reducing bush | No. | 1 |  | - |
| B | 25mm inlet pipe | m | 18 |  | - |
| C | 25mm dia. Elbows | No. | 4 |  | - |
| D | 75mm dia. Valve sockets | No. | 2 |  | - |
| E | 25mm dia. Gate Valve as Peglar | No. | 2 |  | - |
| F | 25 X 25 mm/Equal Reducing Tee | No. | 5 |  | - |
| G | 25mm end plug | No. | 1 |  | - |
| I | 25mm long thread nipple | No. | 2 |  | - |
| J | 25mm union | No. | 4 |  | - |
| K | 25mm short nipple | No. | 11 |  | - |
| L | 25mm heavy duty Globe Valve | No. | 3 |  | - |
| N | 25mm Peglar Water Meter | No. | 1 |  | - |
| **8** | **Finishes** |  |  |  | **-** |
| A | Pointing to all External wall surfaces with cement sand mortar 1:2 | m2 | 16 |  | - |
| B | Apply plastering to lintel surfaces | m2 | 1 |  | - |
| C | Apply plastering to all internal wall faces | m2 | 16 |  | - |
| D | Provide three coats of gloss paint to all plastered wall faces | m2 | 16 |  | - |
| E | Provide 3 coats of bituminous paint to all exposed concreted faces | m2 | 1 |  | - |
| 9 | **Drainage** |  |  |  | - |
| A | Excavate for 1200mm diameter X 2000mm soak pit as detailed | No. | 1 |  | - |
| B | 4" X 8'' X 18" lining block to the site of the catch pit | m | 2 |  | - |
| C | 100mm thick mass concrete grade 15/20 for catch pit base slab and cover | m2 | 1 |  | - |
| D | 100mm thick mass concrete grade 15/20 to the soak pit cover slab | m3 | 1 |  | - |
| E | Provide 150mm perforated waste pipe to soak pit | No | 2 |  | - |
| F | Graded approved free draining hard-core/rubble stone filling the soak pit | m3 | 2 |  | - |
| 10 | **Storage** |  |  |  | - |
| A | Allow for provision and installation of 10,000l double layered plastic water tank on top of the water kiosk inclusive of pipe fittings and fitted with a ball valve | No. | 1 |  | - |
|  | **TOTAL COST FOR PROPOSED WATER KIOSKS** |  |  |  | **-** |
| **COMMUNAL WATER POINT (TAPS STAND)** | | | | | |
|  | **Element No.1: Excavation** |  |  |  |  |
| 1 | General excavation to remove top soil to an average depth of 300mm | m2 | 3 |  | - |
| 2 | Cart away surplus excavated material & deposit at recommended area | m3 | 1 |  | - |
| 3 | 250mm thick approved hard-core, well compacted in layers not exceeding 150mm and blinded using 50mm murrum/quarry dust | m2 | 3 |  | - |
|  | **Element No.2: Masonry Work** |  |  |  |  |
| 1 | 150 x225 X 450mm natural stone to walls to Supper structures walling in 1:3 sand/cement mortar. Rate to included mild all reinforcement at every course | m2 | 4 |  | - |
| 2 | 150mm wide DPM to walls | m | 4 |  | - |
|  | **Element No.3: Concrete Work** |  |  |  |  |
| 1 | Reinforced concrete grade 25/20 - 200mm for floor slab | m3 | 1 |  | - |
|  | **Element no. 4: Reinforcement** |  |  |  |  |
|  | *Steel reinforcement cut, bend & placed in position, unit price to include cutting, bending & placing in position with binding wire and concrete seats* |  |  |  |  |
| 1 | 10mm diameter high tensile steel in floor slab | m | 12 |  | - |
|  | **Element No.5: Pipes and Fittings** |  |  |  |  |
|  | *All pipes to be Galvanised Iron with Screw with adequate jute hemp thread for fixation of fittings* |  |  |  | - |
| 1 | 32mm to 25mm reducing bush | No. | 1 |  | - |
| 2 | 32mm\*11/4'' hdpe female adapter | No. | 1 |  | - |
| 3 | 32mm pegler gate valve | No. | 1 |  | - |
| 4 | 25mm gi pipe threaded to sizes | m | 4 |  | - |
| 5 | 25mm dia. Elbows | No. | 3 |  | - |
| 6 | 25mm dia. taps as Peglar | No. | 3 |  | - |
| 7 | 25 X 25 mm/Equal Reducing Tee | No. | 2 |  | - |
| 8 | 25mm union | No. | 1 |  | - |
| 9 | 25mm long thread nipple | No. | 3 |  | - |
| 10 | 25mm union | No. | 1 |  | - |
| 11 | 25mm short nipple | No. | 1 |  | - |
|  | **Element No.6: Finishes** |  |  |  | - |
| 1 | Apply plastering to all wall faces | m2 | 4 |  | - |
|  | **TOTAL FOR COMMUNAL WATER POINT** |  |  |  | **-** |
| **LIVESTOCK TROUGH - 4m Long by 1m wide by 0.5m deep - with 1m concrete surround** | | | | | |
|  | **Element No.1: Excavation** |  |  |  |  |
| 1 | General excavation to remove top soil to an average depth of 250mm | SM | 40 |  | - |
| 2 | Strip footing excavation- Depth 600mm minimum by 600mm wide and allow for murram backfill and compaction | CM | 3 |  | - |
| 3 | 250mm thick approved hard-core, well compacted in layers not exceeding 150mm and blinded using 50mm murrum/quarry dust | CM | 10 |  | - |
|  | **Element No.2: Masonry Work** |  |  |  |  |
| 1 | 225x225 X 450mm natural stone to walls to SuB-structures walling in 1:3 sand/cement mortar. Rate to included mild all reinforcement at every course | SM | 8 |  | - |
| 2 | 225 x225 X 450mm natural stone to walls to Supper structures walling in 1:3 sand/cement mortar. Rate to included mild all reinforcement at every course | SM | 6 |  | - |
| 3 | 150mm wide DPM to walls | m | 16 |  | - |
| 4 | Allow for bitumen paint application on the inside lower edge sealing off the joint between the masonry stone and concrete slab | SM | 2 |  | - |
| 5 | Apply plastering to all wall faces | SM | 6 |  | - |
|  | **Element No.3: Concrete Work** |  |  |  |  |
| 1 | Reinforced concrete grade 25/20 - 200mm for floor slab | CM | 2 |  | - |
| 2 | Reinforced concrete grade 25/20 - 200mm for strip footing | CM | 3 |  | - |
| 3 | 75mm thick concrete benching laid to falls and with surface steel trowelled rough | SM | 31 |  | - |
|  | **Element no. 4: Reinforcement** |  |  |  |  |
|  | Steel reinforcement cut, bend & placed in position, unit price to include cutting, bending & placing in position with binding wire and concrete seats |  |  |  | - |
| 1 | a) 10mm diameter high tensile steel in footing | m | 72 |  | - |
| 2 | b) R8 diameter high tensile steel in substructure and super structure walling | m | 44 |  | - |
| 3 | C)BRC A142 laid in floor slab | SM | 40 |  | - |
|  | **Element no. 5: Plumbing** |  |  |  |  |
| 1 | Allow for plumbing & fittings inclusive of a 50mm gate valve | LS | 1 |  | - |
| 2 | Construct 1200mm x1200mm x 1000mm standard valve chamber with locable cover | No. | 1 |  | - |
|  | **Element No.6: Drainage** |  |  |  |  |
| 1 | Excavate for 1500mm square X 1500mm soak pit as detailed | No. | 1 |  | - |
| 2 | 4" X 8'' X 18" lining block to the site of the catch pit | m | 3 |  | - |
| 3 | 100mm thick mass concrete for catch pit base slab | m2 | 1 |  | - |
| 4 | Mass concrete to the soak pit cover slab | m3 | 1 |  | - |
| 5 | Provide 150mm perforated waste pipe to soak pit | No | 2 |  | - |
| 6 | Graded approved free draining hard-core/rubble stone filling the soak pit | m3 | 2 |  | - |
|  | **TOTAL FOR LIVESTOCK TROUGH** |  |  |  | **-** |
| **COLLECTION SUMMARY** | | | | | |
| SN | **COMPONENT** | **Unit** | **Qty** |  | **Corrected Amount** |
| 1 | TOTAL COST FOR PROPOSED WATER KIOSKS | No | 3 | - | - |
| 2 | TOTAL FOR COMMUNAL WATER POINT | No | 1 | - | - |
| 3 | TOTAL FOR LIVESTOCK TROUGH | No | 2 | - | - |
| 4 | 16% VAT |  |  |  | - |
|  | **GRAND TOTAL RUGUTU NAMUKI WATER DISTRIBUTION POINTS** |  |  |  | **-** |

