






| PROPOSED CIVIL WORKS AT LUKENYA 66/11KV SUBSTATION | | | | | |
|---|---|------|-----|------|---------------|
| Item | Description | Unit | Qty | Rate | Amount (Kshs) |
| PRELIMINARIES | | | | | |
| | Location of and access to the Site | | | | |
| A | The site of the proposed works is located approx. 40Km from Nairobi CBD, along Mombasa Road at Lukenya. The bidder is advised to visit Site, to familiarize himself with the nature and position of the Site. No claims arising from the Contractor's failure to do site visit will be entertained. | | | | |
| | Pricing items of preliminaries | | | | |
| B | Prices SHALL BE INSERTED against items of "preliminaries" in the tenderer's priced Bills of Quantities. The Contractor is advised to read and understand all preliminary items. The Contractor shall be deemed to have included in his prices or rates for the various items in the Bills of Quantities or Specification for all cost involved in complying with all the requirements for the proper execution of the whole of the Works in the Contract | | | | |
| | Prevention of Accidents, damage or loss. | | | | |
| C | The Contractor is notified that these works are to be carried out on a restricted site where the client is going on with other normal activities. The Contractor is thus instructed to take reasonable care in the execution of the works as to prevent accidents, damage or loss and disruption of activities being carried out by the Client. The Contractor shall allow in his rates any expense he deemed necessary by taking such care within the site. | | | | |
| | Existing Services | | | | |
| D | Prior to the commencement of any work, the Contractor is to ascertain from the relevant authority the exact position, depth and level of all existing services in the area and he/she shall make whatever provisions may be required by the authorities concerned for the support, maintenance and protection of such services. The Contractor shall take every precaution to avoid damage to all existing property including roads, cables, drains and other services, and he will be held responsible for and shall make good all such damage arising from the execution of this contract at his own expense to the satisfaction of the Client. | | | | |
| | Safety Personnel | | | | |
| E | Contractor should allow for a qualified safety person conversant with Kenya Power contractors safety regulations for the entire contract period who will be responsible for receiving work permits in daily basis. The working hours shall be those generally given by the client in accordance with the safety regulations. No work shall start in the absence of the safety person having received permit to work from the relevant authorizing officer. (Refer to attached safety requirements for Contractors working within and without KPLC) | ITEM | 1 | | |
| | Insurance | | | | |
| F | Allow for Insurance Cover for the proposed works and workers. | ITEM | 1 | | |
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| A | <p>Site Security</p> <p>The Contractor shall be entirely responsible for the security of all the Works, stores, materials, plant, personnel, etc, both his own and sub-contractors' and must provide all necessary watching, lighting and other precautions as necessary to ensure security against theft, loss or damage and the protection of the public.</p> | ITEM | 1 | | |
| B | <p>Sign Boards</p> <p>The Contractor shall allow for providing erect publicity, project details, directional, safety, etc sign boards, maintaining and later clearing away on completion a site sign board. The positioning, the size, type of construction and lettering shall be to client's approval.</p> | ITEM | 1 | | |
| C | <p>Power for the Works</p> <p>Allow for <u>adequate Capacity Generator</u> or apply for power connection to site for the supply of power for use for the works.</p> | ITEM | 1 | | |
| D | <p>Approvals</p> <p>Allow a Provisional Sum of Kes. 250,000.00 for facilitation for Kplc PM, PE & Project Supervisors on communications and data for both electronic and print</p> | ITEM | 1 | | |
| E | <p>Visitor's Book and Site Diary</p> <p>The Contractor shall keep on the Site a visitors' book for recording the names of all persons who visit the site for the purpose of the project. He shall also maintain on the Site a diary in which he shall record site activities on a daily basis and particularly any occurrence which bears on the progress of the Works in any way. The visitors' book and the diary shall be surrendered to the Client at the completion of the project or at any other time that he may be directed.</p> | ITEM | 1 | | |
| F | <p>Site Offices</p> <p>The Contractor shall allow for providing, maintaining and later clearing away on completion adequate (about 12m²) site offices with standard furniture for the use of the Project Manager and site meetings.</p> | ITEM | 1 | | |
| G | <p>Storage of Materials</p> <p>The Contractor shall provide at his own risk and cost where directed on the site weatherproof lockup sheds for the safe storage and custody of material for the Works and for the use of workmen engaged thereon and shall remove such sheds and make good damaged or disrupted surfaces upon completion to the satisfaction of the Project Manager.</p> | ITEM | 1 | | |
| H | <p>Water connection</p> <p>Allow for clean water for the works</p> | ITEM | 1 | | |
| I | <p>Tests</p> <p>The Contractor shall furnish at his own cost any samples of materials or workmanship including concrete test cubes required for the works that may be called by the Client for his approval or rejection and any other samples in the case of rejection until such samples are approved by the Client and the Client may reject any materials or workmanship not in his opinion up to to the approved samples.</p>  | ITEM | 1 | | |
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|--|---|------|-----|--|--|
| SWITCHYARD GROUND PREPARATIONS, LEVELLING BALLASTING | | | | | |
| A | Scoop and gather 150mm thick existing ballast (size 1") spread on the switching yard, as directed by the Engineer and cart away to County Government designated dumping site. | SM | 600 | | |
| B | Backfill 150mm thick with imported approved gravel/murram to make up levels and and compacted to create drain falls to receive ballast (m.s) | SM | 600 | | |
| C | Prepare and apply an approved weedicide and herbicide to surfaces of proposed switching yard as per the Manufacture's written instructions and of 5 years and beyond guarantee. | SM | 600 | | |
| D | Supply and lay 1000 gauge polythene approved membrane laid with welted laps of 200mm wide, on compacted and treated murram | SM | 600 | | |
| E | Supply and spread uniformly 150mm thick (25-40mm) ballast in switchyard singly graded. | SM | 600 | | |
| <u>EQUIPMENT FOUNDATIONS</u> | | | | | |
| The following 66kV Foundations comprising of Gantries, Isolators, Circuit Breakers, VTs/CTs/SDs & Post Insulators, Lighting Mast, etc . | | | | | |
| F | Excavate pit foundations commencing from reduced level but not exceeding 1.50 metres deep | CM | 51 | | |
| G | Ditto over 1.5m but not exceeding 3.0m deep | CM | 10 | | |
| H | Extra over excavation of rock in all classes | CM | 28 | | |
| I | Return fill and ram selected excavated material | CM | 18 | | |
| J | Load and Cart away from site surplus excavated materilas to designated county dumping site. | CM | 43 | | |
| Disposal of water | | | | | |
| K | Allow for disposal of general water by pumping. Bailing or otherwise. | ITEM | 1 | | |
| Planking and strutting | | | | | |
| L | Planking and strutting to sides of all excavations : keep excavation free from all fallen materials | ITEM | 1 | | |
| Plain concrete blinding 1:3:6mix; Class 15/20 mm Aggregate; | | | | | |
| M | 50mm thick Vibrated Reinforced Concrete Class 25/20 mm Aggregate in:- | SM | 35 | | |
| N | Foundation bases | CM | 8 | | |
| O | Stub columns | CM | 12 | | |
| <u>High vied Steel Reinforcement Deformed bar BS 44461</u> | | | | | |
| P | D16 | KG | 215 | | |
| Q | D12 | KG | 842 | | |
| R | D8 | KG | 211 | | |
| <u>Fair face finish formwork</u> | | | | | |
| S | To vertical sides of stub/Columns | SM | 91 | | |
| CABLE TRENCHES (600x600mm deep) | | | | | |
| T | Excavate for cable trench 900mm wide and commencing from reduced level not exceeding 1.5m metres deep. | CM | 16 | | |
| U | Load and cart- away excess excavated materials from site to County Government Approved dumping site | CM | 16 | | |
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|---|---|------|-----|--|--|
| A | Concrete work 50mm thick Plain concrete blinding (1:3:6)mix (Class 15/20 mm Aggregate) <u>Vibrated reinforced concrete class 20/25 1:2:4 as described in;</u> | SM | 27 | | |
| B | 100mm thick trench bed | SM | 27 | | |
| C | 150mm thick trench walls with fair face finish <u>Fair face finish formwork</u> | SM | 36 | | |
| D | Sides of trench wall <u>High Steel reinforcement bars including tying bending spacer blocks tying wires and fixing high tensile bars to BS 4461</u> | SM | 78 | | |
| E | D 8 at 150 centres in cable trench Precast concrete trench covers | KG | 352 | | |
| F | Provide and put in place (900x400x75mm) thick precast concrete trench covers reinforced with Y8 bars spaced at 100mm both ways with fair face finish on all sides. [Note: The concrete used for precast covers shall be Class 30] Cable trays | NO | 85 | | |
| G | Supply and fix 14 Gauge galvanized perforated steel cable trays; 300mm wide and 50mm deep including mounting on the trench on well secured hangers/support (ms) and all jointed by welds and bended as appropriate to client satisfactory. Cable Hangers | LM | 30 | | |
| H | Supply and fix steel fabricated cable support structure of 40x25x3mm thick; girth 1300mm long, fixed with rowl bolts or welded on 150mm long M.S. inserts in the vertical sides of concrete cable trench wall at 1000mm centres. (see attached) Cable Ducts | NO | 40 | | |
| I | Supply and lay 110mm diameter heavy duty PVC ducts as cable ducts | LM | 48 | | |
| J | Ditto but 90 ⁰ bends | NO | 5 | | |
| K | Ditto but Tees | NO | 6 | | |
| L | 100mm thick concrete (1:3:6) bed and surround to; 200mm diameter pipe, allowing for all necessary excavations and formwork. | LM | 48 | | |
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|----------|--|------|-----|--|--|
| | <p>STEEL GALVANIZED STRUCTURES Supply Fabricated Steel Structures for 66kV equipment including Bus Bars, Voltage and Current transformers, Surge Diveters, Post Insulators and Isolators, Lighting mast etc. The steel structures shall be manufactured from hot-rolled structural steel sections of tensile strength of 430-460N/mm², yield strength of 255N/mm², density of 7860kg/mm² galvanizing thickness of >110 microns as per drawings attached including all welding and nuts and bolts connections, stiffener plates/cleats, washers, etc, including transporting to site and delivery to site in a well coded manner, fully assembled to ascertain completeness and handed over to client ready for erection.</p> <p>Notes: 1) All Holes To Be 18mm diameter where applicable for M16 Bolts unless otherwise stated. 2) All Steelwork to Be Free From Rust, Rust, Dust Burrs E.T.C Then Galvanised By Hot Dip. Process, Thickness and Quality of Zinc Coating to Withstand Test of 729. 3) Assembly Bolts, Nuts and washers to Conform TO BSS 916 and the Quantity Supplied to Include 10% Spare Allowance. 4). Fabricators Are To Designate All Steelwork Items and Provide Erection Mark Plans.5) All Individual Steel Parts to Be Marked - KPLC</p> | | | | |
| A | CTs Structure; size 200x200x6mm thick SHS and 2.40m long - Approx. 165 Kgs each. | PCS | 3 | | |
| B | CTs Structure; size 200x200x6mm thick SHS and 2.40m long - Approx. 165 Kgs each. | PCS | 3 | | |
| C | Post Insulator Structure; size 200x200x6mm thick SHS and 3.0m long - two-legged - Approx. 420 Kgs. | PCS | 1 | | |
| D | Isolator (Air break switch); size 200x200x6mm thick and 3.0m high; two-legged -Approx.500kg each. | PCS | 2 | | |
| E | Surge Diverter Structure, size 150x150x6mm thick SHS and 2.40m long, two-legged -120Kgs each | PCS | 3 | | |
| F | 66kV Terminal Gantry (Lattice) (2 vertical Gantries -9300.0m overall height and Horizontal Boom/Girder) -8.35m long -Approx.2000kg | PCS | 1 | | |
| G | Lighting mast structure - Aprox.365Kg. | PCS | 2 | | |
| H | Allow for grouting after KPLC Erection of structures | ITEM | 1 | | |
| I | Supply and fix all galvanized steel bolts min M28x1000mm long Including poring anchoring holding in position and allowing for all bolts nuts washers and bottom plates. | No. | 40 | | |
| J | Ditto but M25x650mm long | No. | 80 | | |
| K | <p>Allow Kes.450,000.00 for factory visit, inspection and tests before, during and after, in workshop/factory fabrication and galvanization. All requird tests shall be carried out by client Inspection Team/Engineers to Accept/Reject every process, Quality, Workmanship etc before delivery to site as specified in Technical Specifications for steel structures, including all facilitation/transport and communication for 6no.(CIT members ,PE,PM)</p>  | ITEM | 1 | | |
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SUB-TOTAL

ADD 16% VAT

GRAND TOTAL CARRIED TO FORM OF TENDER

Amount in

words:.....
.....

Company Stamp

Signed:

Name:

Address:

Insert Contract Period:Weeks

