

ESWATINI COMMUNICATIONS COMMISSION



**ESWATINI
COMMUNICATIONS
COMMISSION**

REQUEST FOR TENDER

ELECTRICAL

TENDER NUMBER: ESCCOM/TS/003/2020-2021/1902E

**TENDER NAME: ELECTRICAL INSTALLATION FOR ESCCOM HEAD OFFICE
DEVELOPMENT**

August 2020



CONTENTS

SECTION 1	TENDER CONDITIONS & INSTRUCTIONS	1-8
1.1	GENERAL	1-1
1.2	COMPLIANCE WITH CONDITIONS & INSTRUCTIONS	1-1
1.3	DESCRIPTION OF THE WORKS	1-1
1.4	TENDER DOCUMENTS	1-1
1.5	COMPLETION OF TENDER DOCUMENTS	1-1
1.6	COMPLETION OF SCHEDULE OF QUANTITIES	1-1
1.7	AUTHORITY OF TENDER	1-1
1.8	NO ALTERATIONS	1-2
1.9	COPYING ERRORS	1-2
1.10	ISSUE OF ADDITIONAL DOCUMENTS	1-2
1.11	INCOMPLETE TENDERS	1-2
1.12	INSPECTION OF SITE OF WORKS	1-2
1.13	INFORMATION TO BE SUBMITTED WITH TENDER	1-2
1.14	EVALUATION OF TENDERS	1-2
1.14.1	EVALUATION OF TECHNICAL PROPOSALS	1-3
1.14.2	EVALUATION OF FINANCIAL PROPOSALS	1-6
1.14.3	EVALUATION OF QUALITY COST BASED PROPOSALS	1-6
1.15	TRADING LICENCE AND TAX CLEARANCE CERTIFICATE	1-6
1.16	TENDER DEPOSIT	1-6
1.17	TENDER PURCHASE RECEIPT	1-6
1.18	INSURANCES	1-6
1.19	LANGUAGE OF THE TENDER	1-6
1.20	LAWS OF ESWATINI	1-6
1.21	TENDER VALIDITY	1-6
1.22	SUBMISSION OF TENDERS	1-6
1.23	DEADLINE FOR SUBMISSION OF TENDERS	1-7
1.24	PRIMARY POINT OF CONTACT	1-7



1.25	TENDER OPENING	1-7
1.26	MODIFICATION OF TENDER	1-7
1.27	TENDER DOCUMENTS CONFIDENTIAL.....	1-8
1.28	EXPENSES OF TENDER.....	1-8
1.29	REJECTION OF TENDERS.....	1-8
1.30	UNDUE INFLUENCE	1-8
1.31	INSTRUCTIONS NOT FORMING PART OF CONTRACT.....	1-8
1.32	NOTICE OF INTENTION TO AWARD	1-8
1.33	TENDER TIMELINE.....	1-8
SECTION 2 CONDITIONS OF CONTRACT		2-0
SECTION 3 SPECIFICATION.....		3-1
3.1	SPECIFICATION PART I	3-1
3.1.1	SUB-CONTRACTOR'S OBLIGATIONS	3-1
3.1.2	DELIVERY AND STORAGE.....	3-1
3.1.3	QUANTITIES.....	3-1
3.1.4	CHECKING OF TENDER DOCUMENTS	3-1
3.1.5	COMPETENCY OF WORKMEN	3-1
3.1.6	CONTROL.....	3-1
3.1.7	QUALITY OF WORK.....	3-1
3.1.8	LIASON BETWEEN SUBCONTRACTORS AND THE ELECTRICAL DESIGNER	3-1
3.1.9	SITE LIAISON	3-1
3.1.10	PROGRAMME AND DATES FOR COMMENCEMENT AND COMPLETION	3-1
3.1.11	PROGRESS OF WORK.....	3-2
3.1.12	MEETINGS	3-2
3.1.13	PAYMENTS AND RETENTION	3-2
3.1.14	JBCC SUBCONTRACT AGREEMENT	3-2
3.1.15	GUARANTEE OF MATERIALS AND WORKMANSHIP.....	3-2
3.1.16	VARIATION ORDERS	3-2
3.1.17	DETAILS	3-2
3.1.18	ESCALATION OF COSTS.....	3-2
3.1.19	SERVICE CONNECTIONS	3-2
3.1.20	TESTING.....	3-2
3.1.21	COMPLETION.....	3-3
3.1.22	QUALITY OF MATERIAL AND WORKMANSHIP	3-3
3.1.23	SITE VISIT	3-3



3.1.24	PROCEDURE.....	3-3
3.1.25	CONTRACT DRAWINGS.....	3-3
3.1.26	AS-BUILT DRAWINGS.....	3-3
3.1.27	PRIME COST (P.C) ITEMS	3-3
3.1.28	ORDERS TO BE PLACED TIMELY.....	3-3
3.1.29	INSURANCE OF THE WORKS	3-3
3.1.30	PUBLIC LIABILITY INSURANCE	3-3
3.1.31	WORKMENS INSURANCE	3-3
3.1.32	CONTINGENCIES.....	3-3
3.1.33	GUARANTEES AND SURETY	3-4
3.1.34	Taxes and Duties	3-4
3.1.35	SHOP DRAWINGS AND SAMPLES	3-4
3.1.36	HUTS AND ACCOMMODATION	3-4
3.1.37	ENVIRONMENTAL MATTERS	3-4
3.1.38	DATE FOR POSSESSION OF SITE	3-4
3.1.39	DATE FOR PRACTICAL COMPLETION	3-4
3.1.40	PENALTY CLAUSE.....	3-4
3.1.41	INTERIM CONTRACT.....	3-4
3.2	PECIFICATION PART II – GENERAL AND TECHNICAL INSTRUCTIONS	3-4
3.2.1	GENERAL	3-4
3.2.2	IMPORTANT NOTE.....	3-4
3.2.3	ELECTRICAL SUPPLY.....	3-5
3.2.4	EXISTING INSTALLATION	3-5
3.2.5	REMOVAL OF ELECTRICAL EQUIPMENT FROM EXISTING INSTALLATION	3-5
3.2.6	TEMPORARY BUILDER’S SUPPLY	3-5
3.2.7	TESTS AND INSPECTIONS PRIOR TO PRACTICAL COMPLETION.....	3-5
3.2.8	CABLES	3-5
3.2.9	CABLE TRAY	3-6
3.2.10	CABLE MARKERS.....	3-6
3.2.11	PROTECTION OF CABLES	3-6
3.2.12	UNDERGROUND CABLE SLEEVES.....	3-6
3.2.13	DISTRIBUTION BOARDS	3-6
3.2.14	MAIN EARTH CONNECTIONS.....	3-6
3.2.15	EARTH AND BONDING.....	3-6
3.2.16	LIGHTNING PROTECTION	3-7
3.2.17	FINISHED INDICATED HEIGHTS.....	3-7
3.2.18	EXPANSION JOINTS	3-7
3.2.19	FINAL POSITIONS OF EQUIPMENT.....	3-7
3.2.20	WIREWAYS	3-7



3.2.21	FLOOR CHANNEL SYSTEM	3-7
3.2.22	POWER SKIRTING	3-7
3.2.23	LUMINAIRE AND POWER SYSTEMS	3-8
3.2.24	WIRING.....	3-8
3.2.25	LUMINAIRE	3-8
3.2.26	LIGHT SWITCHES	3-8
3.2.27	MASTER KEY SWITCHES.....	3-8
3.2.28	EXTERNAL SECURITY LIGHTING SYSTEMS	3-8
3.2.29	INTERNAL SECURITY LIGHTING SYSTEMS	3-8
3.2.30	PHOTO ELECTRIC DAYLIGHT SWITCH	3-9
3.2.31	CONTACTOR SWITCH	3-9
3.2.32	BELL PUSHES	3-9
3.2.33	BELLS	3-9
3.2.34	SINGLE PHASE SWITCHED SOCKET OUTLETS.....	3-9
3.2.35	NON-STANDARD SINGLE PHASE SWITCHED SOCKET OUTLETS.....	3-9
3.2.36	THREE PHASE SWITCHED SOCKET OUTLETS.....	3-9
3.2.37	HOT WATER CONTAINER INSTALLATION	3-9
3.2.38	HEATERS.....	3-9
3.2.39	UNDERFLOOR HEATING SYSTEMS.....	3-9
3.2.40	AIR CONDITIONING INSTALLATION	3-10
3.2.41	STOVE AND COOKING APPLIANCES.....	3-10
3.2.42	MOTORS AND MACHINERY	3-10
3.2.43	REFRIGERATION	3-10
3.2.44	EXTRACTOR FANS.....	3-10
3.2.45	BATTERY CHARGERS.....	3-10
3.2.46	BURGLAR ALARM SYSTEM.....	3-10
3.2.47	INTERCOM AND PUBLIC ADDRESS SYSTEM.....	3-11
3.2.48	TELEPHONE SYSTEM.....	3-11
3.2.49	TELEPHONE MANHOLES.....	3-11
3.2.50	TV SYSTEM.....	3-11
3.2.51	COMPUTER SYSTEM	3-11
3.2.52	FLOOR SLAB OPENINGS.....	3-11
3.2.53	EXTERNAL JOINT BOXES	3-11
3.2.54	EMERGENCY EXIT SIGNS.....	3-12
3.2.55	DOOR LOCK CONNECTIONS	3-12
3.2.56	RIPLE RELAYS.....	3-12
3.2.57	ELECTRICAL LEGEND AND CIRCUIT REFERENCE	3-12
3.2.58	TRENCH REFILLING AND SOIL RECOMPACTION	3-12
3.2.59	SURGE PROTECTION DEVICES	3-12



3.2.60	CIRCUIT BREAKERS	3-12
3.2.61	SPRAGUE TUBING.....	3-12
3.2.62	FIRE ALARM / DETECTION INSTALLATION	3-12
3.3	SPECIFICATION PART 3: SCOPE OF WORKS	3-12
3.3.1	SCOPE OF CONTRACT	3-12
3.3.2	IMPORTANT TENDERING REQUIREMENTS.....	3-13
3.3.3	IMPORTANT NOTES.....	3-13
3.3.4	BALANCING OF POWER.....	3-13
3.3.5	ELECTRICITY SUPPLY	3-13
3.3.6	MAIN EARTH CONNECTIONS.....	3-13
3.3.7	EARTHING AND BONDING.....	3-13
3.3.8	MAIN POWER CABLES	3-13
3.3.9	IMPORTANT NOTE.....	3-14
3.3.10	WIREWAYS AND CHANNELING	3-14
3.3.11	CABLE LADDERS.....	3-14
3.3.12	POWER SKIRTING SYSTEMS.....	3-14
3.3.13	DRAW BOXES.....	3-14
3.3.14	WIRING.....	3-14
3.3.15	TELEPHONE SYSTEM.....	3-15
3.3.16	DATA SYSTEMS	3-15
3.3.17	EXTERNAL SECURITY LIGHTS	3-15
3.3.18	LUMINAIRE	3-15
3.3.19	LIGHT SWITCHES	3-15
3.3.20	MASTER KEY SWITCH SYSTEM.....	3-15
3.3.21	PHOTO ELECTRIC DAYLIGHT SWITCH	3-15
3.3.22	SINGLE PHASE ELECTRIC SOCKET OUTLETS	3-16
3.3.23	AIR CONDITIONING INSTALLATION	3-16
3.3.24	EXTRACTOR FANS.....	3-16
3.3.25	HOT WATER CYLINDERS	3-16
3.3.26	ELECTRIC SIGNS	3-16
3.3.27	WINDOW LIGHT PROVISIONS	3-16
3.3.28	THREE PHASE MACHINE CONNECTIONS	3-16
3.3.29	LIGHTNING PROTECTION SYSTEM.....	3-16
3.3.30	STANDBY EMERGENCY GENERATOR	3-17
3.3.31	ELECTRIC BELL SYSTEM (IF REQUIRED).....	3-17
3.3.32	ELECTRIC HAND DRIERS.....	3-17
3.3.33	LIFTS	3-17
3.3.34	TEST CERTIFICATES	3-17



SECTION 4	SCHEDULE OF QUANTITIES	4-0
SECTION 5	FORMS AND INFORMATION SCHEDULES.....	5-0
5.1	ANNEXURE A – FORM OF TENDER	5-1
5.2	ANNEXURE B – APPENDIX TO FORM TENDER	5-5
5.3	ANNEXURE C – AUTHORITY FOR SIGNATORY	5-6
5.4	ANNEXURE D – SURETIES.....	5-7
5.5	ANNEXURE E – SCHEDULE OF CURRENT WORK.....	5-8
5.6	ANNEXURE F – DETAILS OF PREVIOUS PROJECTS	5-9
5.7	ANNEXURE G – CONTRACTOR'S SUPERINTENDENCE	5-10
5.8	ANNEXURE H – SCHEDULE OF PLANT	5-11
5.9	ANNEXURE I – ALTERATIONS BY TENDERER.....	5-12
5.10	ANNEXURE J – CONTACT INFORMATION	5-13
5.11	ANNEXURE K – JOINT VENTURE/PARTNERSHIP AGREEMENT	5-14
5.12	ANNEXURE M – CERTIFICATE OF INSPECTION OF SITE OF WORKS	5-15
SECTION 6	JBCC CONTRACT AGREEMENT.....	6-0
SECTION 7	DRAWINGS.....	7-0



TENDER CONDITIONS & INSTRUCTIONS

ELECTRICAL INSTALLATION

ESCCOM HEAD OFFICE IN EZULWINI

SECTION 1 TENDER CONDITIONS & INSTRUCTIONS



1.1 GENERAL

This document shall consist of pages numbered consecutively from page 1 to the last page with the prefix denoting the chapter number as indicated in the table of contents. The tenderer shall check the number of pages and should there be any missing or should there be any doubt or obscurity as to the meaning of any particular item or description, he shall inform the Engineer immediately and have the same rectified or explained, as no liability will be admitted in respect of errors in the Tender due to the foregoing.

All Drawings and Specifications shall remain the property of the Principal and shall be returned whether a tender is submitted or not. Failure to comply with this condition shall render a Tender liable to disqualification.

1.2 COMPLIANCE WITH CONDITIONS & INSTRUCTIONS

The Tenderer shall carefully examine all instructions, conditions, forms, terms, specifications and drawings in the tender documents. The Tenderer shall be solely responsible for meeting the requirements of the tender and for any omission or errors in his responses. Failure to furnish all information required by the tender or the submission of a tender that is not responsive to the tender in every respect, will be at the Tenderer's own risk and may result in rejection of his tender.

1.3 DESCRIPTION OF THE WORKS

The construction site of the works is in Ezulwini, on Portion 11 of Farm 850.

The Works covered by this sub-contract consist of, but are not exclusively herein described: -

- i. H.T. Distribution Network
- ii. Substation Construction
- iii. L.T. Distribution Network
- iv. General Purpose Sockets
- v. Interior & Exterior Lighting Systems
- vi. Telephones Network
- vii. Fire Detection & Alarm System
- viii. Bonding and Earthing
- ix. Lightning Protection System
- x. Stand-by Power Supply
- xi. Power Factor Correction Equipment

1.4 TENDER DOCUMENTS

The Tender Documents consist of the documents described below together with any addenda thereto issued in accordance with Clause 1.10 hereinafter:

- Instructions to Tenderers
- JBCC Subcontract Agreement Form

- Appendix to Tender
- Schedules of Information
- Deed of Suretyship
- General Conditions of Contract
- Special Conditions of Contract
- Standard Specification
- Project Specification
- Preamble to Schedule of Quantities
- Schedule of Quantities
- Drawings

1.5 COMPLETION OF TENDER DOCUMENTS

The Form of Tender shall be signed and witnessed and all information required herein shall be inserted by the Tenderer.

The Schedule of Rates shall be **fully completed** and priced in Emalangi.

1.6 COMPLETION OF SCHEDULE OF QUANTITIES

Each item in the Schedule of Quantities shall be priced by the Tenderer. The rate or price for each item shall include the cost of executing the work and fulfilling the obligation described in the item. Items against which no rate or price is entered by the Tenderer will not be paid for by the Employer when executed and shall be deemed to be covered by other rates and prices in the Schedule.

In terms of the Vat Tax Act (No 12 of 2011) as amended, Tenderers will be deemed to have included in their tender rates, an allowance for Vat Tax which may be payable on the purchase of any goods incorporated in such rate. No additional claim will be considered for the recovery of Vat Tax by the Contractor on any item purchased, or any service rendered during the Contract.

Preliminary and General items should not exceed fifteen (15%) percent of the total cost of the measured works. If this percentage is exceeded the Employer reserves the right to reject the Tender.

In the event of conflict between the Instructions to Tenderers and the Preamble to the Schedule of Quantities then the latter shall take precedence.

1.7 AUTHORITY OF TENDER

The Form of Tender must be signed by one duly authorised to do so and evidence of the authority of the signatory must be provided. A Tender submitted by



corporation must bear the seal of the corporation and be attested by its Secretary.

1.8 NO ALTERATIONS

No alterations shall be made in the Tender, Schedule of Quantities or other documents and the Tender shall comply entirely with the terms of the Tender Documents.

1.9 COPYING ERRORS

There shall be no erasing or overwriting and any mistake which is corrected shall be initialled by the Tenderer.

1.10 ISSUE OF ADDITIONAL DOCUMENTS

If for any reason during the Tender period it becomes necessary to vary the Tender Documents, an Addendum will be issued to all Tenderers. Addenda will be numbered consecutively commencing with No.1 and Tenderers are required to insert the appropriate numbers in paragraph one of the Form of Tender.

Should any Tenderer have questions to ask or be in doubt about the meaning of the Tender Documents, he should refer them in writing (which will be deemed to include facsimile transmission) to the Engineer. Questions submitted will be consolidated at intervals and issued, together with answers, to all Tenderers. The questions and answers as issued will give no indication of which Tenderer raised the questions. Questions and answers will not form part of the Tender or the Contract. If, arising from a question, it is necessary to vary the Tender Document, an Addendum will then be issued in accordance with the above procedure.

1.11 INCOMPLETE TENDERS

Tenderers must submit offers for the whole of the Works. Tenders submitted for separate sections only or Tenders that are incomplete will not be considered.

1.12 INSPECTION OF SITE OF WORKS

The Tenderer is advised to visit and inspect the place where the contract is to be executed and its surroundings and obtain for himself, on his own responsibility, all information that may be necessary for preparing the tender and entering into a contract.

The costs of visiting the site are to be borne by the Tenderer.

Mandatory site inspection is scheduled to be on Wednesday, 09th September 2020 at 10:00 hours (CAT), at the construction site in Ezulwini.

1.13 INFORMATION TO BE SUBMITTED WITH TENDER

The Tenderer must submit the following information with the Tender:

- a) Technical and Financial Proposal (In separate Sealed Envelopes, with **1 original and 5 copies, per proposal**)
- b) Proof of registration with Construction Industry Council (CIC)
- c) Certified Copy of Valid Labour Compliance Certificate
- d) Original Valid Tax Compliance Certificate
- e) Certified Copy of Valid Trading License
- f) Certified Copy of Valid SNPF Compliance Certificate
- g) Certified Copy of Valid Form J & Form C
- h) Recent Police Clearance for all directors and shareholders as listed in Form C
- i) Proof of Workmen's Compensation
- j) Company Profile with CVs of key personnel
- k) Company audited financial statements for the past three years or since inception
- l) At least three reference letters from previous project Engineers.
- m) Project implementation plan in the form of a **General Method Statement** which should include the following:
 - Procurement Plan
 - Work Plan up to Commissioning Stage

Please note: Some of the documents/items listed above form part of the Responsiveness of Tender Assessment and **are mandatory documents** (see Table 1 in Section 1.14.1)

Omission of any of the listed mandatory documents will result in automatic disqualification of the tenderer.

1.14 EVALUATION OF TENDERS

Tenderers are advised that, in the comparison of Tenders, the Employer is not bound to accept that containing the lowest rates, the lowest overall price, or any other Tender.

Tenders shall be evaluated using, but not limited to the following tender evaluation criteria:

There are six components in the tender evaluation process, five of which are non-financial and the last one being financial. Please note that the technical will be evaluated before the financial and only qualifying technical proposals will undergo financial evaluation.



1.14.1 EVALUATION OF TECHNICAL PROPOSALS

The technical assessment will establish whether the tender meets the requirements set out in the specification and, if not, the significance of any variation from that specification.

The five technical (non-financial) tender evaluation processes are set out below:

1.14.1.1 Responsiveness of Tender Assessment

This will determine whether:

- i. All required documentation and information have been submitted;
- ii. Tender documents have been appropriately signed and authorised in the form of a covering letter;
- iii. The document has been submitted in the correct format; and
- iv. The correct number of legible copies has been submitted.

1.14.1.2 Resources and Capability Assessment

This will address the experience of the Tenderer as well as the capability and qualifications of the key personnel who will be operating under the contract, including the management and supervisory backup. Where appropriate, reference checks are essential and must cover aspects such as:

- a. The Tenderer's track record: i.e. past performance of similar contracts; industry knowledge;
- b. The availability of trade references (A list of at least three suitable references is to be provided to support this process);
- c. The contractors managerial and expertise capacity (as evidenced by sound management practices as well as qualifications, experience and extent of involvement/availability of key personnel and supervisory staff) to deliver the services. **Please note: The Tenderer will not be allowed to substitute a member of the proposed project staff without written consent from the client. Any substitution must be of similar qualification and experience**
- d. Project implementation plan.

1.14.1.3 Risk Assessment

The assessment will establish all risk factors which may be prejudicial to ESCCOM and performance of the contract. This may include ascertaining the integrity and

general conduct in business dealings, professional conduct of the tenderer's directors and senior management; compliance with the law and encumbrances which may hinder due performance under the contract. This may involve investigations into whether any of the directors and senior managers have criminal records in connection with corruption, fraud, theft or forgery; financial track record of the tenderer, etc

1.14.1.4 Promotion of Swazi Business

This criterion shall determine the extent to which ownership of the business is vested in Swazi citizens and/or the extent to which the Tenderer will:

- a. Encourage Swazi citizens to be involved in the business;
- b. Improve levels of Swazi citizens' participation in ESCCOM business;
- c. Enhance economic development for Swazi citizens;
- d. Increase the numbers and types of Swazi business activities in the area;
- e. Promote opportunities for employment of Swazi citizens and
- f. Promote business enterprise development for Swazi citizens.

TENDER CONDITIONS & INSTRUCTIONS

ELECTRICAL INSTALLATION
ESCCOM HEAD OFFICE IN EZULWINI

Table 1: TENDER EVALUATION CRITERIA

1.0	Responsiveness of Tender Assessment (Mandatory)	
	Criteria Elements	Criteria Weighting Factors
1.1	Technical and Financial Proposal (In separate Sealed Envelopes with correct number of legible copies)	Omission of any of the listed mandatory documents will result in automatic disqualification of the tenderer.
1.2	Proof of registration with Construction Industry Council (CIC)	
1.3	Certified Copy of Valid Labour Compliance Certificate	
1.4	Original Valid Tax Compliance Certificate	
1.5	Certified Copy of Valid Trading License	
1.6	Certified Copy of Valid SNPF Compliance Certificate	
1.7	Certified Copy of Valid Form J & Form C	
1.8	Recent Police Clearance for all directors and shareholders as listed in Form C	
1.9	Proof of Workmen's Compensation	
2.0	Resources and Capability Assessment	
	Criteria Elements	Criteria Weighting Factors
2.1	Financial Stability	
	• Bank Letter	2
	• Audited Financial Statements (past 3 years)	4
2.2	Plant & Equipment: Proof of ownership and/or Letter of Lease: <ul style="list-style-type: none"> • 2 x Bakkies • at least 1 x Complete Toolbox • Multi-meter tester • Mega testers (See Annexure H)	6
2.3	Company Profile with CVs of key personnel: Staff: who have been involved or worked on similar projects - Please attach proposed project organogram and project staff CVs. <ul style="list-style-type: none"> • At least one (1) Director (Minimum: Bachelor's Degree in Electrical Engineering and 10 years' experience) • At least two (2) technicians (Minimum for each: Diploma in Electrical Engineering and/ any other relevant electrical certificates and 5 years' experience) • A Contracts Manager (Minimum: Diploma in Electrical Engineering and/ any other relevant electrical certificates and 10 years' experience) (See Annexure G) 	15
2.4	Details of work of a similar nature that the sub-contractor has executed during the last three years: complete with description, date, cost and contact details of client. (See Annexure F) Tenderer to provide at least three reference letters from previous project Engineers.	10



TENDER CONDITIONS & INSTRUCTIONS

ELECTRICAL INSTALLATION
ESCCOM HEAD OFFICE IN EZULWINI

2.5	Details of work of a similar nature that the sub-contractor is currently engaged in: complete with description, date, cost and contact details of client. (See Annexure E)	6
2.6	Project implementation plan in the form of a General Method Statement which should include the following: <ul style="list-style-type: none"> • Procurement Plan • Work Plan up to Commissioning Stage 	10
	SUB-TOTAL SCORE	53
3.0	Risk Assessment	
	Criteria Elements	Criteria Weighting Factors
3.1	All risk factors which may be prejudicial to ESCCOM and performance of the contract, including but not limited to availability of resources (human, financial or suitable equipment for the tender) or extent of the Tenderer's commitment in other projects	3
3.2	Size of the tender in relation to the size of the company in order to determine ability to complete the tendered works	2
3.3	Ascertaining the integrity and general conduct in business dealings, professional conduct of the Contractor's directors and senior management	1
3.4	Circumstances which may expose ESCCOM and hinder due performance under the contract, e.g., criminal records in connection with corruption, fraud, theft or forgery by the contractor's directors and management etc.	1
	SUB-TOTAL SCORE	7
4.0	Swazi Business Promotion	
	Criteria Elements	Criteria Weighting Factors
4.1	Degree to which ownership of business vests with Swazi citizen(s) (Illustrated in Form J and Form C)	2
4.2	Degree to which business is managed by Swazi citizen(s)	2
4.3	Extent to which the Tenderer will:	
	• Encourage more Swazi citizens to be involved in the business	2
	• Encourage the impartation of technical and business skills to Swazi citizens	2
	• Improve levels of Swazi citizens participation in ESCCOM business	1
	• Promote opportunities for employment of Swazi citizens	1
	SUB-TOTAL SCORE	10
	TOTAL	70



TENDER CONDITIONS & INSTRUCTIONS

ELECTRICAL INSTALLATION
ESCCOM HEAD OFFICE IN EZULWINI

Please note the following:

- The price/cost of each of the technically compliant proposals shall be considered only after the evaluation of the above technical criteria.
- A tender which obtains less than 70% of the total points allocated to Criterion 2 to 4 (Resources and Capability Assessment, Risk Assessment, and Promotion of Swazi Business) shall be deemed to be non-responsive and eliminated from further evaluation.

1.14.2 EVALUATION OF FINANCIAL PROPOSALS

Foreign currency rate will be converted to Lilangeni (SZL) at the official selling rate published by the Central Bank of Eswatini on the day of the latest submission date of the tender. Evaluation will take place in Lilangeni (SZL) only

1.14.3 EVALUATION OF QUALITY COST BASED PROPOSALS

The lowest evaluated Financial Proposal (Fm) will be given the maximum financial score (Sf) of 100 points. The financial scores (Sf) of the other Financial Proposals will be computed as follows: $Sf = 100 \times Fm / F$, in which Sf is the financial score, Fm is the lowest price and F the price of the proposal under consideration.

Proposals will be ranked according to their combined technical (St) and financial (Sf) scores using the weights (T = the weight given to the Technical Proposal; P = the weight given to the Financial Proposal; T + P = 1) indicated in the Data Sheet: $S = St \times T\% + Sf \times P\%$. The firm achieving the highest combined technical and financial score will be invited for negotiations.

The weights given to the Technical and Financial Proposals are:

$$T = 0.7$$

$$P = 0.3$$

1.15 TRADING LICENCE AND TAX CLEARANCE CERTIFICATE

Tenderers should attach to their tenders a valid trading licence in the name of the tendering company. Tenderers should note that in accordance with Income Tax (Clearance Certificate) Regulations 1988, all persons tendering for provision of goods or services in excess of E 5,000.00 to Government or parastatal bodies, with effect from 1st April 1992 are required to produce Tax clearance certificates for Government tender in the name of the tendering company.

The absence of this document will constitute immediate disqualification of the company's tender.

1.16 TENDER DEPOSIT

The Tenderer is not required to provide a tender Deposit.

1.17 TENDER PURCHASE RECEIPT

The Tenderer shall submit the original receipt for the purchase of the Tender documents. **Tender documents are to be collected from Eswatini Communications Commission (ESCCOM) from Wednesday 26th August 2020 until Wednesday 02nd September 2020.**

1.18 INSURANCES

The Tenderer's attention is drawn to Clause 10 of the JBCC General Conditions of Contract.

In addition, Tenderers are advised that there is a Statutory obligation in eSwatini to comply with the "Insurance Proclamation of 1973" and that the eSwatini Royal Insurance Corporation is the sole legal insurer operating in eSwatini.

The general terms of the insurance policy (ies) with any modifications thereto will be agreed between the Employer and the selected Tenderer prior to the issue of the Letter of Acceptance in accordance with the Conditions of Contract.

1.19 LANGUAGE OF THE TENDER

All correspondence in connection with the Tender shall be in the English Language.

1.20 LAWS OF ESWATINI

Tenderers are advised to familiarize themselves with the laws and regulations in force in eSwatini, especially those relating to Immigration, Customs and Excise, Tax (Income and Corporate), Labour and Health and Arbitration.

1.21 TENDER VALIDITY

Tenders shall remain valid and open for acceptance for ninety (90) days from the tender submission date.

In exceptional circumstances, prior to the expiry of the original tender validity period, the Employer may request a specified extension in the period of validity. The request and the response thereto shall be made in writing or by facsimile. A tenderer may refuse the request. Tenderers agreeing to the request will neither be required nor permitted to modify their tenders.

1.22 SUBMISSION OF TENDERS

As set out hereunder the original copy of the Form of Tender is to be submitted and is to comply with the following instructions.



TENDER CONDITIONS & INSTRUCTIONS

ELECTRICAL INSTALLATION
ESCCOM HEAD OFFICE IN EZULWINI

The Form of Tender, completed and signed in all respects together with the information required by Clause 1.14 hereof must be sealed in an envelope or package marked "TENDER".

The tenderer must submit the original and 5 copies of the Technical Proposal and the original and 5 copies of the Financial Proposal. All Tender Documents shall be addressed to:

The Tender Board

Eswatini Communications Commission

Mbabane Office Park

Mbabane

Eswatini

The proposal shall consist of a Technical Proposal and a Financial Proposal, which shall be in **SEPARATE SEALED ENVELOPES** marked:

TECHNICAL PROPOSAL

TENDER No. ESCCOM/TS/003/2020-2021/1902E
TENDER Name: ELECTRICAL INSTALLATION FOR
ESCCOM HEAD OFFICE DEVELOPMENT

And:

FINANCIAL PROPOSAL

TENDER No. ESCCOM/TS/003/2020-2021/1902E
TENDER Name: ELECTRICAL INSTALLATION FOR
ESCCOM HEAD OFFICE DEVELOPMENT

Respectively,

The two envelopes must be enclosed in a sealed outer envelope, which shall be marked:

TENDER No. ESCCOM/TS/003/2020-2021/1902E
TENDER Name: ELECTRICAL INSTALLATION FOR
ESCCOM HEAD OFFICE DEVELOPMENT

Do Not Open before 12:00 hours (CAT) on 30 September 2020

The envelope or package shall carry no indication whatsoever of the name or mark of the Tenderer nor any other means of identification.

No Tender delivered after the stipulated time, from whatever cause arising will be considered. No telegraphic Tenders will be accepted.

Failure to mark the envelope clearly and accurately may result in rejection of the application.

The Proposal should be deposited in the Tender Box situated at **the Eswatini Communications Commission, Mbabane Office Park MBABANE, by 12:00 hours (CAT) on 30 September 2020.**

1.23 DEADLINE FOR SUBMISSION OF TENDERS

Tenders shall be received by the Agent on behalf of the Employer at the address specified and no later than the time stated in the Letter of Invitation.

The Employer may, at his discretion, extend the deadline for submission of Tenders by issuing an amendment in accordance with Clause 17 of the General Conditions of Contract, in which case all rights and obligations of the Employer and Tenderers previously subject to the original deadline shall thereafter be subject to the new deadline as extended.

Any Tender received by the Employer after the deadline for submission of Tenders prescribed by the Employer in accordance with this Clause will be returned unopened to the Tenderer.

1.24 PRIMARY POINT OF CONTACT

Tenderers shall note that during the period from receipt of the RFT until the completion of the evaluation as indicated to the tenderers by ESCCOM, all queries shall be communicated via the contact below, no direct contact shall be made with any known member of the evaluation team.

Clarifications may be requested in writing (email only), but not later than **22 September 2020**. The address for requesting clarifications is: **tenders@esccom.org.sz**

1.25 TENDER OPENING

Technical Proposals will be opened by the ESCCOM Tender Board in the presence of the bidders' representatives who choose to attend at the time and in the place specified in the tender advertisement after the submission deadline. Tenderers will be notified of the result once the adjudication is complete. Tenderers who pass the technical proposal evaluation stage will then have their financial proposals evaluated.

1.26 MODIFICATION OF TENDER

Any Tenderer has the right to withdraw, modify or correct his Tender after it has been delivered to the Employer provided the request for such withdrawal, modification or correction is received at the address given in Clause 1.22 hereof either in writing or by facsimile before the closing time on the date set for submission of Tenders. Any withdrawal, modification or correction made or facsimile will only be valid



TENDER CONDITIONS & INSTRUCTIONS

ELECTRICAL INSTALLATION
ESCCOM HEAD OFFICE IN EZULWINI

confirmed by registered letter mailed before the said date. The original Tender as amended by such written or facsimile communication will be considered as the Tenderer's offer. The Employer may ask any Tenderer for a clarification of his Tender. Nevertheless, no Tenderer will be permitted to alter his Tender after the Tenders have been opened. However, clarifications which do not change the Tender Rates and Price may be accepted.

1.27 TENDER DOCUMENTS CONFIDENTIAL

All recipients of the Tender Documents (whether a Tender is submitted or not) shall treat the details of the Documents as private and confidential.

1.28 EXPENSES OF TENDER

The Employer will not be responsible for or pay for expenses or losses which may be incurred by the Tenderer in the preparation of the Tender or in visiting the site in connection therewith.

1.29 REJECTION OF TENDERS

The Tender of any Tenderer who has not conformed to the foregoing conditions may not be considered.

1.30 UNDUE INFLUENCE

Tenderers are not to offer, promise or give any person connected with the Tender or the awarding of the Contract any gratuity, reward, bonus, discount or consideration of any kind in connection with the obtaining of the Contract, or to communicate with any member of the Engineer's or Employer's organisations on any question affecting the awarding of the Contract during the period between the Tender closing date and the Contract award date. Any real or attempted contravention of this condition which comes to the attention of the Employer will result in action being taken against the party concerned and rejection of the relevant Tender.

1.31 INSTRUCTIONS NOT FORMING PART OF CONTRACT

These Instructions to Tenderers shall not form part of the Contract. They are intended only to aid Tenderers in the preparation of their Tender.

1.32 NOTICE OF INTENTION TO AWARD CONTRACT

Following the contract award decision, the Commission shall prepare a notice indicating the name of the best evaluated tenderer, the value of the proposed contract and any evaluation scores.

The notice shall be-

(a) sent directly to all tenderers who submitted tenders by letter and/or email; and,

(b) published on the Eswatini Public Procurement Regulatory Authority (ESPPRA) website.

ESCCOM shall allow a period of at least ten (10) working days to elapse from the date of despatch and publication of the notice before a contract is awarded.

1.33 TENDER TIMELINE

ESCCOM aims to conclude the Tender phase of procurement by October 2020, and all stages are summarized in Table 2.

Table 2: Summary of events in Tender stage

	Event	Required By
1	Tender issue date	21-Aug-20
2	Compulsory site inspection	09-Sept-20
3	Tenderers' Questions: Tenderers' may submit questions via email: tenders@esccom.org.sz	22-Sep-20
4	Response to tenderers' questions: ESCCOM will provide responses to all tenderers' questions.	23-Sep-20
5	Submission of tenders: Tenderers submit their bids. All tenders must be submitted by 12 PM	30-Sep-20
6	Contract award	Oct-20



SECTION 2 CONDITIONS OF CONTRACT



PART I - GENERAL CONDITIONS OF CONTRACT

The General Conditions of Contract applicable to this Contract are the Principal Building Agreement and the Sub Contract Agreement Conditions of Contract of The Joint Building Contracts Committee (Series 2000). The Sub Contract Agreement Conditions of Contract are specific to the Nominated Sub Contractor under this contract. All clauses and references to the subcontractor in the Principal Building Agreement Conditions of Contract for the Main Contractor will be binding, hence the two documents form the General Conditions of Contract.

A copy of the General Conditions is available for inspection at the office of the Engineer, and it shall be assumed that the Subcontractor is fully familiar with, and aware of his obligations under, the General Conditions. The aforesaid documents are assumed to have been read carefully and understood by the Tenderer who is referred to the same for the full contents and true intent and meaning of each clause. And who must allow whatever costs may consider necessary for the carrying out and observance of same, and any special conditions applicable to the Principal Contractor.

PART II - SPECIAL CONDITIONS OF CONTRACT

SCC 1 Clause 1.0: Definitions

In the Conditions of Contract and throughout this document the following definitions shall apply:

- a) "Employer" means: **Eswatini Communications Commission (ESCCOM)**

Add the following definition to Clause 5.0

- b) "Agent/Engineer" means: **M A Dlamini Consulting Engineers**

P O Box 4876

Mbabane

Swaziland

- c) "Commencement Date" shall mean 14 days after the contractor receives sufficient information and/or effective means of access to the site for the commencement of the works.
- d) For this Contract the "Ruling Language" shall be English and the Contract shall be legally construed and interpreted in English.
- e) Words implying persons or parties also include companies or corporations.

SCC 2 Clause 7.0: Governing Law

Add the following to Clause 1.0

..... "The law which is to apply to the Contract and according to which the Contract is to be interpreted shall be the law of the Kingdom of Swaziland. All references to South African legislation shall be deemed to refer to the equivalent Swaziland legislation unless such legislation does not exist."

SCC 3 Clause 5(1): Employer's Agents (Engineer (s))

Add the following to Clause 4.0:

" The Contractor shall give the Engineer all reasonable co-operation, information and assistance he may require for co-ordinating the Works and in the event of any matter arising which the Contractor deems to be of importance to the progress of the work, he shall contact the Engineer without undue delay.

The Engineer will visit the Works from time to time. However, should any matter arise which the Contractor considers of such importance that the Engineer must be consulted, then every reasonable step must be taken by the Contractor to contact the Engineer by telephone, telegram, facsimile or letter before proceeding with the point at issue.

The Contractor's obligations are defined in Clause 3. The Engineer is however employed to ensure compliance with the terms of this Contract, timely completion, proper construction and building practice as well as adequate finishes, in accordance with the best tradition of the various trades.

The Engineer is therefore in no way responsible for any act or omission on the part of the Contractor or his employees which may result in any latent defects in materials or workmanship, breach or neglect or any local regulation, or for anything done by the Contractor not in accordance with good construction and building practice. The Contractor therefore remains responsible for the foregoing whether the same be discovered before or after the final certificate, or any other certificate, is approved."

SCC 4 ISSS Reticulation Drawings Contractor's Copies

Three sets of paper prints of all drawings will be issued free of charge to the Contractor and the Contractor shall be responsible for the cost of any further copies he may require".

SCC 5 Clause 11(1): Limit of Liability

(i) Contractor's Liability shall not exceed the sum of E 1,000, 000.00.

(ii) Contractor's Liability shall expire on the completion and acceptance of the works.

SCC 6 Clause (11): Insurances

All insurance cover required in terms of the contract shall be provided by the Contractor for the duration of the contract.

The minimum amount of Third-Party Insurance cover shall be E1, 000, 000.00.

SCC 7 Provisional Sums and Contingency Allowance

"No claim by the Contractor for loss of overhead charges or profit on the grounds that any provisional sum, prime cost sum or contingency allowance has not been expended in whole or part, will be considered"

SCC 8 Clause 2.2: Tendered Rates & Prices

Add the following to this clause:

"The rates and prices in the Schedule of Rates shall be final and binding throughout the period of the Contract and the Defects Liability Period."

SCC 9 Clause 32: Application of Contract Price Adjustment Factor

"There won't be a contract price adjustment factor applied, therefore Tenders will be fixed at the tendered prices."

SCC 10 Clause 30: Monthly Payments

"Payment for materials on Site will only be considered for materials physically on site. Any statement, in which a claim for materials on site is included, shall contain a declaration by the Contractor that the materials on site listed in the statement are owned by the Contractor. This declaration shall be accompanied by proof of ownership and ownership of the materials shall be transferred to the Employer. Copies of invoices from suppliers of materials claimed, shall accompany all claims."

SCC 11 Period of Tender validity shall be 90 working days from closing date for submission of Tender

SECTION 3

SPECIFICATION



3.1 SPECIFICATION PART I**3.1.1 SUB-CONTRACTOR'S OBLIGATIONS**

The tenderer shall include for everything required for a complete and satisfactory installation in accordance with the drawings and specifications, including any item not specifically mentioned but obviously necessary for the proper completion of the contract.

The whole installation shall be carried out in accordance with the SANS Code of Practice and any special requirements of the Swaziland Supply Authority. The Tenderer is advised to communicate with the Supply Authority in order to ascertain the full implications of any special requirements, if any.

No claims for extras will be entertained due to the Electrical Subcontractor having failed to comply with the above.

3.1.2 DELIVERY AND STORAGE

The Subcontractor must make his own arrangements, regarding transport of labour and materials and shall provide for his own plant. The Subcontractor will be responsible for the safe storage of all equipment, materials and plant and shall be held responsible for the loss by theft or damage in any way, whether installed on the contract or not.

3.1.3 QUANTITIES

The Subcontractor shall measure the quantities, dimensions and particulars of materials required based on the drawings and reference to the Bill of Quantities to complete the specified contract.

3.1.4 CHECKING OF TENDER DOCUMENTS

Tenderers are required to check the specifications and drawings carefully. Should any discrepancy be found, application to the Electrical Engineer is to be made, in order that this error may be rectified. Any claim for revision of the tender price, due to such error, will not be reconsidered after the opening of the tenders.

3.1.5 COMPETENCY OF WORKMEN

The Electrical Designer shall have the right to call upon the Subcontractor to remove any workman, who, in the opinion of the Electrical Engineer, is inefficient or whose presence is having a deleterious effect on the progress of the work, and such workman shall not again be employed on the building site without prior approval of the Electrical Designer.

3.1.6 CONTROL

The Subcontractor shall employ on the works at all times a competent foreman or charge hand and any

instructions given to him by the Electrical Engineer, through the Principal Contractor, shall be deemed to have been given by the Subcontractor.

3.1.7 QUALITY OF WORK

The Electrical Engineer or his representative shall have the right to visit the site at any reasonable time and inspect the progress of the work and materials used, and reserve the right to reject:

- a. Any work in his opinion not to specification or standard and which is badly or incorrectly carried out.
- b. Any material which is considered not to specification or is of an inferior quality.

The Subcontractor shall rectify any rejected work at his own cost and no claim whatsoever in this regard will be entertained.

3.1.8 LIASON BETWEEN SUBCONTRACTORS AND THE ELECTRICAL DESIGNER

Instructions given through the Principal Contractor to the Subcontractor by the Electrical Engineer in connection with carrying out of the contract, shall be carried out expeditiously.

The Subcontractor is to liaise with the Electrical Designer to ascertain the solution of any problem which may arise.

Any suggestions which the Subcontractor considers would improve the installation as specified shall be submitted to the Electrical Engineer for approval.

No deviation or alteration from the requirements of the specification, schedules or drawings shall be made without the written approval of the Electrical Designer.

3.1.9 SITE LIAISON

It is noted that there will be other contractors and sub-contractors working on the site and the Nominated Sub-contractor shall liaise fully and co-operate with all such parties.

Various disciplines will be working on the project simultaneously. It is therefore essential that all parties must operate with the utmost care in order not to damage any section of any buildings or infrastructure which have already been completed or are in the process of construction.

3.1.10 PROGRAMME AND DATES FOR COMMENCEMENT AND COMPLETION

A programme for the Works will be prepared by the Main Contractor. The Nominated Sub-contractor will be required to ensure that there is regular progress of work



and timely completion in conformity with the overall construction programme. The Main Contractor shall be entitled to vary the programme from time to time, according to site circumstances, and the Sub-contractor shall execute his work accordingly.

The Sub-contractor shall be responsible for obtaining any information or documentation required to enable the Sub-contract works to proceed in accordance with the programme.

3.1.11 PROGRESS OF WORK

Upon acceptance of a tender and issue of instruction to proceed, the work shall immediately be put in hand. All reasonable steps shall be taken to complete the contract as soon as possible. A sufficient number of workmen shall be employed to ensure such progress is commensurate with the progress of the building work.

It shall be the responsibility of the Subcontractor to liaise with the Principal Contractor to ascertain and agree all programme requirements.

3.1.12 MEETINGS

There will be regular meetings held on site. These will include, among others, those between subcontractors and the Main Contractor and between the contractor and the Engineer. The subcontractor shall, where instructed, ensure attendance at these meetings by a suitable senior staff member, and to present documented reports of progress, programmes, labour etc.

3.1.13 PAYMENTS AND RETENTION

The Subcontractor shall furnish to the Electrical Designer an application for progress payment in duplicate not later than five working days before the monthly application by the Principal Contractor is due. The Electrical Designer together with the Quantity Surveyor will thereupon satisfy themselves as to the accuracy of the application. The amount due shall be the total value of work done and materials used up to date of the application, less retention money and previous payment made to date.

The Electrical Engineer will certify the amount due to the Subcontractor and will arrange for inclusion of the amount in the next certificate of payment due to the Principal Contractor.

No interest is payable on retention monies held.

3.1.14 JBCC SUBCONTRACT AGREEMENT

The Subcontractor shall lodge a guarantee in terms of the "JBCC Nominated Subcontract Agreement", with

modifications as listed in the Principal Contract Agreement.

The maximum guarantee shall not exceed 12.5% of the electrical subcontract sum.

3.1.15 GUARANTEE OF MATERIALS AND WORKMANSHIP

The Subcontractor shall be required to guarantee the whole of the installation in regard to quality of materials and workmanship for a period of six months. He shall be required to make good any defects free of charge to the Employer, during the period of six months from the date of taking over by the Employer.

3.1.16 VARIATION ORDERS

Sums claimed by the Subcontractor for extras will not be paid, unless authorized by the Electrical Engineer and the Quantity Surveyor in writing. All variations giving details of charges for extras and deductions for omissions shall be submitted in duplicate within five days after any case of extras or omissions has arisen.

3.1.17 DETAILS

The Electrical Engineer will furnish all necessary detailed drawings, sketches or measurements during the progress of the contract.

3.1.18 ESCALATION OF COSTS

"Notwithstanding anything to the contrary contained in the Schedule of Conditions of Building Contract referred to above, this contract shall be subject to adjustment in accordance with the latest edition of the Contract Price Adjustment Provisions, issued by the Swaziland Building Industries Advisory Council".

The set Contract Price Adjustment Provisions will be strictly adhered to and Tenderers are to note that no provisional calculations based on previous or anticipated index figures will be made for the purposes of interim certificates. Indices applicable to SWAZILAND will be used in order to calculate these costs.

All Tenderers shall fully complete the attached "Alternative Tender" which submitted price shall be firm and binding and not subject to any escalation of costs.

3.1.19 SERVICE CONNECTIONS

Payment for all service connections deposits etc., to the Supply Authority is to be made by the owners. No percentage profit on the item will be permitted.

3.1.20 TESTING



The Electrical Subcontractor shall request the Supply Authority to undertake all necessary tests on completion of this contract, before the installation is to be made alive.

The Subcontractor will be required to replace, rewire or renew at no extra cost any portion of the installation which fails to pass the prescribed tests.

The Subcontractor is to obtain a certificate from the Testing Inspector which is to be attached to his final account. Where required, approved certificates of compliance shall be provided.

3.1.21 COMPLETION

On completion of the contract, any damage which may have been done to the plasterwork, floor, ceilings, paintwork and wood etc., during the progress of the electrical installation, shall be repaired and made good to original finishes by the Electrical Subcontractor, to the satisfaction of the Electrical Engineer and the Architect.

3.1.22 QUALITY OF MATERIAL AND WORKMANSHIP

All materials and equipment shall be of the best quality and unused and suitable for the purpose for which they are employed. The arrangement of the equipment, when installed shall be in accordance with the best practice.

Special care is to be taken to ensure neatness in all parts of the installation. Unless otherwise specified or approved, all materials and equipment shall be in accordance with SANS specifications, or, where this does not exist the relevant British or European Standard specification.

3.1.23 SITE VISIT

Before tendering the Tenderers must visit the site and satisfy themselves as to the local conditions and the extent and nature of the work to be undertaken.

No claims for extras arising from the lack of knowledge in this respect will be entertained.

3.1.24 PROCEDURE

The Electrical Engineer shall, in consultation with the Electrical Subcontractor, direct the order in which various parts of the contract shall be executed, where there are specific technical constraints.

3.1.25 CONTRACT DRAWINGS

The drawings accompanying this specification must be regarded as diagrammatic and all positions and dimensions shown in these drawings must be verified on site.

Before putting work on any section of this contract the Subcontractor must ensure that he is in possession of the latest detailed electrical drawings. Dimensions therein must be checked against the latest Architects' and Structural Engineer's drawings and site measurements. Any discrepancy note must immediately be reported to the Electrical Engineer for clarification.

No claims for extras will be entertained for alterations or making good due to the Subcontractor failing to comply with the above.

3.1.26 AS-BUILT DRAWINGS

The Subcontractor shall submit a full set of neatly marked drawings to the Electrical Engineer on completion of this contract.

This set of drawings must show the final electrical layout as actually carried out, and Tenderers must note that failing to comply with this in good time, may delay issuing of the final payment certificate.

3.1.27 PRIME COST (P.C) ITEMS

The Subcontractor shall take delivery of all P.C items and shall be responsible for these until the Subcontract work is completed and handed over.

All unpacking, cleaning, assembly, storage and installation shall be undertaken by the Subcontractor who is to report any defects to the Electrical Designer.

3.1.28 ORDERS TO BE PLACED TIMELY

The Subcontractor shall place orders and indents for all materials timely. It shall be the Sub-contractor's responsibility to ensure that sufficient information is given to manufacturers to ensure that materials are delivered in time to meet the Contractual programme.

3.1.29 INSURANCE OF THE WORKS

The Main contractor shall effect and maintain insurance cover as detailed in Clause 12 of the General Conditions of Contract for the entire works, including these subcontract works.

3.1.30 PUBLIC LIABILITY INSURANCE

The subcontractor shall effect and maintain insurance cover as detailed in Clause 10 and the Nominated subcontract data of the General Conditions of Contract.

3.1.31 WORKMENS INSURANCE

The Subcontractor shall allow for all costs incurred in observing the current Workmen's Compensation Act and Unemployment Insurance Act.

3.1.32 CONTINGENCIES



Where a contingency sum is included in the "Form of Tender" this shall only be expended on written instruction from the Electrical Designer.

3.1.33 GUARANTEES AND SURETY

In terms of the JBCC Subcontract agreement, the Subcontractor shall be obliged to exchange guarantees with the Principal Contractor when either of the party's requests such guarantees.

3.1.34 Taxes and Duties

The subcontractor shall be responsible for all taxes and duties and shall include for them in his prices.

3.1.35 SHOP DRAWINGS AND SAMPLES

Shop drawings of items to be manufactured and required samples of specialized equipment for approval shall be submitted to the Electrical Designer, promptly.

3.1.36 HUTS AND ACCOMMODATION

All temporary huts, stores, offices sanitary accommodation etc. shall be provided by the Sub-contractor. Space will be available adjacent to the Main contractor's camp for the setting up of these. The subcontractor will be responsible for the provision of his water, electrical and telephone connections.

3.1.37 ENVIRONMENTAL MATTERS

The Nominated subcontractor shall be aware of and comply with the Comprehensive Mitigation Plan included in the main contract document

3.1.38 DATE FOR POSSESSION OF SITE

The date for possession of site shall be _____

3.1.39 DATE FOR PRACTICAL COMPLETION

The total contract as specified herein, for overall occupation is to be completed by the _____

Partial contract as listed herein for beneficial occupation of the following areas:

THE ELECTRICAL SUBCONTRACTOR SHALL ENSURE THAT COMPLETION DATES OF ALL PARTIAL OCCUPATIONAL AREAS SHALL COINCIDE WITH THE EMPLOYERS SET PROGRAMME AND REQUIREMENTS.

3.1.40 PENALTY CLAUSE

Penalties for non-completion of this specified contract, per calendar day or part thereof, for works which have remained incomplete shall be:

E_____ per day for each of the partial occupation areas and

E_____ per day for the overall contract.

3.1.41 INTERIM CONTRACT

The Tenderer acknowledges that in the event of this tender being accepted, the tender documents, the terms and conditions herein set out and the common law shall constitute a binding contract between the Tenderer and the Employer, until such time as the contract documents have been dully signed.

3.2 PECIFICATION PART II – GENERAL AND TECHNICAL INSTRUCTIONS

3.2.1 GENERAL

The work carried out under this contract will comply with any Statutory wiring regulations currently applicable in Swaziland. In addition to compliance with the above, work shall also comply with the SANS Code of Practice of the Wiring of Premises, SANS 10142 part 1 & 2, and all subsequent amendments. The installation shall comply with the requirements specified in this specification and on the drawings, be complete, and shall include all equipment and materials necessary whether specified in detail or not, for a **proper and workmanlike installation** to the approval of the Employer, Architect and Engineer.

3.2.2 IMPORTANT NOTE

All drawings accompanying this specification must be regarded as diagrammatic. The positions of all points and equipment shown diagrammatically on the drawings shall be assumed correct for tendering purposes but are by approximation only.

Although every effort has been made to ensure that positions and dimensions are correct and well-co-ordinated with the building features and services provided, it will be the Electrical Sub Contractor's responsibility to check such positions against the Engineer's details and drawings Employer, the latest Architectural drawings and site measurements, before



putting work in hand on any section of this contract on site.

No claims will be allowed for any costs due to the contractor's negligence in correlating drawings with site work and he shall at his own cost alter such positions should they prove to interfere with building features or services provided by others.

The Subcontractor shall install all conduits, cables and services within the ceiling voids, unless specifically noted to the contrary. This shall simplify the relocation of conduits and equipment if shop wall positions are to be altered at any future date.

All equipment within the ceiling spaces shall be squarely, neatly and securely attached to the roofing structure. No conduits, cables and wire-ways may be laid or attached to the ceiling structures.

3.2.3 ELECTRICAL SUPPLY

The local supply authority is Eswatini Electricity Company (EEC).

The successful Tenderer shall immediately on appointment submit all necessary documentation to the supply authority for the required new or up-rated power supply as specified in the attached "Scope of Works".

The Subcontractor shall liaise with the supply authority throughout this contract to ensure timely power supply, and shall confirm with them the final point of cable entry and all their requirements which shall be included in this contract.

3.2.4 EXISTING INSTALLATION

Where the works involve alterations and additions to existing or incomplete premises, these works if operational, shall be kept in full and continuous operation throughout the period of the contract.

Modifications to existing systems, requiring prolonged switch off periods, shall be undertaken outside of normal working hours.

The Subcontractor shall directly liaise with all pertinent parties to ascertain the most appropriate times for switching off the power supply.

The Subcontractor shall make due allowance for all necessary temporary connections and work outside of normal hours in the tendered price.

3.2.5 REMOVAL OF ELECTRICAL EQUIPMENT FROM EXISTING INSTALLATION

The Subcontractor shall remove and keep a record all electrical equipment from areas to be demolished or

changed and securely store them within his care until required to be re-installed in the various new positions.

All unused equipment shall be handed to the employer on the completion of this contract. The Subcontractor shall therefore ensure that this equipment is maintained in good working order.

Units which are to be re-utilised must be thoroughly cleaned, checked and reinstated to an acceptable level before being re-installed in the new desired positions.

3.2.6 TEMPORARY BUILDER'S SUPPLY

Temporary power supply and any other such work requested by the Builder (Principal Contractor) is deemed to fall outside the scope of this contract.

3.2.7 TESTS AND INSPECTIONS PRIOR TO PRACTICAL COMPLETION

All systems are to be checked by the Contractor prior to commissioning. Copies of all checks for each installation shall be presented to the Engineer for approval **BEFORE** commissioning takes place.

It is the responsibility of the Contractor to provide all labour, accessories and properly calibrated and certified measuring instruments necessary to record the following parameters:

- continuity of ring final circuit conductors
- continuity of protective conductors, including main and supplementary equipotential bonding
- earth electrode resistance
- insulation resistance
- polarity
- earth fault loop impedance
- operation of residual current devices
- phase voltage
- current per phase
- illumination levels in lux

The Contractor is responsible for the arrangement of such tests. He shall give **at least 72 hours' notice** to the Engineer prior to the test date.

3.2.8 CABLES

The Subcontractor shall supply and install all cables as indicated in the specification and drawings, in a workmanlike manner, and in accordance to the "Code of Practice for the Wiring of Premises".

Where cables are installed side by side, these shall be spaced 100 mm apart, unless noted to the contrary.



In general, buried cables shall be embedded in sifted soil, free of stones, clay and rubble, from 80 mm below to 80 mm above cables. Low voltage cables shall be buried at a depth of 600 mm below the finished ground level when measured to the top of the cable, excepting within garden areas, where they shall be buried at 1000 mm below finished ground level.

PVC cable warning tape shall be installed along the full length of the reticulation at a distance of 300 mm directly above the cable.

For main power, external LV cables shall be buried at 500 mm below the finished ground level. Internal cables shall be installed squarely within ceiling spaces, attached to suitably size galvanized cable trays which shall be supplied and installed by the Subcontractor.

High Voltage cables shall be buried at 1000 mm below ground level and shall be covered with heavy duty precast concrete slabs or sleeving with marked "Danger" tape along the entire route of such cables. If requested, suitable cable markers shall be installed to mark the position and change of all cable routes.

Cabling shall be on a loop-in system directly into the poles and kiosks.

Joints in the cables shall be kept to a minimum and where authorised shall be as described in clause 3.2.16 herein, with conductors securely crimped in an approved manner and by using approved tools and equipment only. The use of pliers or side cutters for this purpose is not permitted.

Re-compaction of soil shall be as described in clause 3.2.55 herein, or as specifically requested by the Civil and Structural Engineer.

Where site conditions are likely to reduce the maximum current carrying capacity of cables, the Subcontractor shall, before installing the cables, notify the Engineer and shall not proceed with that section of the work until advised by the Engineer of the course to be followed.

3.2.9 CABLE TRAY

The Subcontractor shall provide suitable and approved cable trays on spacer bars for all main cables which shall be securely and neatly attached to the building structure.

3.2.10 CABLE MARKERS

Standard surface marker; A screwed on metal plate on the marker must show the cable numbers of the cables installed underneath the marker and arrow symbols must show the direction of the cable route and/or deviation. Cable markers shall be installed at the approximate positions indicated on the drawings.

3.2.11 PROTECTION OF CABLES

All exposed cables entering any floor sleeve shall be protected by means of heavy-duty sleeving to a minimum height of 800 mm A.F.F.L and securely fixed to the structure.

3.2.12 UNDERGROUND CABLE SLEEVES

Unless noted to the contrary, the Subcontractor shall provide all indicated power and low voltage sleeves to accommodate the external reticulation systems.

3.2.13 DISTRIBUTION BOARDS

The subcontractor shall supply and install the specified distribution boards in the indicated positions, and shall implement the manufacture of all units immediately on appointment to ensure timely delivery.

Detailed drawings shall be submitted for approval to the Electrical Engineer and Supply Authority (where applicable) **BEFORE MANUFACTURE MAY PROCEED**. Details of the distribution enclosures shall be submitted for approval to the Engineer prior to installation

All distribution boards shall be manufactured by a reputable firm that is a specialist in the field and who shall install and fit the switchgear and equipment and carry out the internal wiring.

All switchgear and equipment shall be as specified and shall bear the SABS markings. On completion of the installation, the Subcontractor shall provide a detailed designation list of circuits on all panels, and shall the load testing of all circuits to ensure equal load balancing over the three phases.

All items of equipment mounted in the distribution boards including the distribution board shall be clearly and correctly **labelled** inclusive of all warning labels. Labels shall be of the Thermo-plastic "Sandwich" material normally white with engraved black letters or numbers, and fixed with screws or pop-rivets to the board. The use of adhesive for this purpose will not be accepted.

3.2.14 MAIN EARTH CONNECTIONS

Unless noted to the contrary in this specification, specialists shall be requested by the Nominated Subcontractor to undertake a survey to establish the exact earthing conditions existing on the site. Their results and recommendations shall be assessed and the Subcontractor shall be issued with future site instructions by the Electrical Engineer.

All main cables shall be accompanied by the specific bare copper earth conductors.

3.2.15 EARTH AND BONDING



The complete system shall be effectively bonded to earth in accordance to the latest "Code of Practice for the Wiring of Premises" SANS 10142, as well as the relevant bye-laws of Swaziland Electricity Company.

All feeder cables shall be provided with specified external bare copper earth conductors.

Any modification which may be requested by the Supply Authority is to be undertaken expeditiously.

Earthing conductors in power skirting ducting shall be insulated and coloured "Green".

3.2.16 LIGHTNING PROTECTION

Unless noted to the contrary in this specification, the Nominated Subcontractor shall obtain details of the potential lightning conditions for this site and shall employ specialized Lightning Engineers to undertake the necessary survey.

3.2.17 FINISHED INDICATED HEIGHTS

All specified heights shall be measured from the finished floor level to the bottom of each unit specified, unless instructed to the contrary.

Confirm the final heights of each outlet before putting work in hand on any section of this contract.

3.2.18 EXPANSION JOINTS

The Subcontractor shall provide suitable and approved expansion joint at every point wherever the system passes through structural expansion joints.

3.2.19 FINAL POSITIONS OF EQUIPMENT

All drawings and layouts shall be regarded as diagrammatic and all positions shown therein must be verified before work is undertaken on any section of this contract.

3.2.20 WIREWAYS

All wire-ways shall be of metal manufacture of either the solid heavy-duty standard screw threaded type or the more economical "Bosal" type.

PVC conduits may only be utilized if embedded in floor slabs, ceilings and walls. **NO SURFACE PVC CONDUITS SHALL BE PERMITTED.**

Conduit boxes and fittings shall be of malleable Iron Manufacture excepting for wall boxes (i.e. switchboxes etc.) which shall be galvanized heavy gauge pressed steel.

Where conduits and conduit fittings are installed in positions exposed to the weather or in areas susceptible to moisture, these shall be of galvanized manufacture.

3.2.21 FLOOR CHANNEL SYSTEM

Unless otherwise specified, underfloor wiring channels shall be of the heavy duty three compartment type measuring 200 mm wide x 32 mm high, with provision to mount floor box units at 2000 mm intervals.

Ancillary equipment such as junction boxes, floor box sockets, shall be specifically manufactured to fit this floor ducting.

Installation of the floor channel shall be undertaken in conjunction with the Principal Contractor who shall be required to provide a level screen bed onto which the Subcontractor shall securely install the floor channel. This floor channel shall form the upper level of the final floor screed.

It shall remain the Subcontractor's responsibility to ensure that this floor channel is level and in position according to specifications.

Non rust draw wires shall be installed throughout the entire length of the low voltage compartments.

3.2.22 POWER SKIRTING

Power skirtings, finished in baked enamel, similar or equal to "O-Line OL803" manufacture and coloured "Hospital Grey" unless instructed to the contrary, shall consist of two or three compartments, as specified herein, and unless otherwise specified, shall be mounted at skirting height.

Power skirting within the shopping areas shall be two compartments, three-way equipment of similar colour equal to "O-Line OL901" manufacture.

Outlets and ancillary equipment shall be specifically manufactured to fit this system.

The subcontractor shall install the indicated feeder conduits to wall boxes set behind the skirting and which shall be mechanically and electrically interconnected.

Where power skirting is interrupted by doorways, protruding columns etc., the specified conduit jumpers shall be installed to bridge this break. All sections of power skirting shall be mechanically interlinked and electrically bonded.

Bunching of conduits shall not be permitted and the Subcontractor is to equally space all conduit entries throughout the length of each power skirting route.

Interlinks to power skirting which is to be installed remote from external walls shall be embedded in the floor slab.

All accessories such as elbows, tees, end caps etc., must be compatible with the power skirting.



3.2.23 LUMINAIRE AND POWER SYSTEMS

Heavy duty galvanized sheet metal channels with galvanized metal clip on cover plates shall be supplied and installed by the Subcontractor in the positions indicated in this specification and accompanying drawings.

Where applicable, all channels shall be neatly suspended from roof trusses and purlins by means of approved non-rust metal suspension rods as noted in the attached drawings.

The Subcontractor is to provide suitable suspension points at every required hanging position away from the roof structure, below the roof insulation and which are to be securely attached to the roof purlins. Hangers shall not exceed 2200 mm apart.

3.2.24 WIRING

Wiring in Conduits: All circuits shall be wired in individual conduits unless instructed to the contrary.

Wiring in Ducting: All wiring of individual circuits shall be harnessed together to facilitate the easy identification of such circuits.

Wiring in Roof Spaces: Power channelling system with 5 Ampere luminaire socket outlets to be utilized in order to provide maximum flexibility.

Innovative Wiring Systems: May only be employed provided that the proposed system meets with the approval of the Electrical Designer and the Supply Authority.

3.2.25 LUMINAIRE

Unless otherwise specified, all surface mounted light fittings shall be attached to standard round conduit boxes with a minimum of two only non-rust screws.

All specified light shall be installed complete with lamps in the indicated positions. Should it be that units cannot be mounted in the positions indicated for whatever reason, then this is to be referred to the Electrical Engineer for clarification?

Recessed luminaire fitted in dropped ceilings may be provided with CABTYRE tails and 5 amp 3 pin plug tops and plugged into approved socket outlet systems installed within the ceiling spaces.

Luminaire shall be supplied and installed by the Subcontractor unless noted to the contrary. Should the Subcontractor be required to supply these units, written guarantees stating the manufacturer's liabilities for replacing faulty gear, and time periods of such guarantees shall be submitted promptly.

Where a specified product or manufacturer is listed, any other manufactured luminaire may be offered, provided such a product is equal or similar to that specified, and approved by the Employer and the Electrical Engineer as such.

Light fittings shall be supplied and installed complete including all fasteners, brackets, supports and auxiliary materials to complete a proper and workmanlike installation in the indicated positions.

The position of all units shall be dependent on the final layouts and no work is to be undertaken until such final layout drawings become available.

INSTRUCTIONS to purchase the specified units, once tenant details are known, shall be issued to the Subcontractor who shall immediately place orders for timeous delivery to site, and shall fully undertake their installation and connections within the specified final positions.

3.2.26 LIGHT SWITCHES

The Subcontractor shall provide and install the specified flush and surface mounted light switches in the indicated position, which are to be mounted at 1200 mm AFFL unless noted to the contrary.

Wherever multiphase switching systems coincide at a common point, individual switch boxes are to be provided and spaced 25 mm apart.

3.2.27 MASTER KEY SWITCHES

The Subcontractor shall provide the specified key switches at the indicated entrances, and shall provide the Employer with THREE only spare keys to operate these units.

These key switches shall operate all 12-hour circuits through contactors mounted in various distribution boards.

Units shall be flush mounted lockable type with removable keys.

Provide the keys directly to the Employer on completion of the contract.

3.2.28 EXTERNAL SECURITY LIGHTING SYSTEMS

All external security lights shall be wired on the specified circuits and shall be controlled by externally mounted photo-electric cell, at the specified height, and operated by contactors housed in various distribution boards, unless noted to the contrary.

3.2.29 INTERNAL SECURITY LIGHTING SYSTEMS

Where required, indicated luminaire shall be connected to the 24-hour wiring system, and shall remain on when the majority of 12-hour light circuits are switched off.

3.2.30 PHOTO ELECTRIC DAYLIGHT SWITCH

Photocells shall be of the round box mounted type or alternatively standard units mounted within a transparent box and shall be of the 'Fischer Pierce' manufacture.

3.2.31 CONTACTOR SWITCH

Street lights shall be switched through a 30 Ampere, triple pole contactor and a 5 Ampere circuit breaker to operate the area lights via a photo cell.

3.2.32 BELL PUSHES

Unless otherwise specified, bell pushes shall be rated at 5 Amp, 220 V even when operating low voltage bell units, and shall be equal and similar to the light switch units specified above.

3.2.33 BELLS

Unless noted to the contrary, the Subcontractor shall provide and install electrically operated "Ding-Dong" bells which shall be situated in the indicated positions at 2200 mm A.F.F.L.

Battery operated units shall not be permitted.

3.2.34 SINGLE PHASE SWITCHED SOCKET OUTLETS

The Subcontractor shall provide and install the standard single-phase switches socket outlets in the indicated positions at the specified heights.

Flush mounted units shall be installed in 100 x 100 x 50 mm pressed steel galvanized boxes and shall be mounted at 300 mm and 1200 mm A.F.F.L unless noted to the contrary.

Surface mounted units shall be of the metal clad type and mounted 1200 mm AFFL unless noted to the contrary.

Where units are exposed to the atmosphere or situated in damp conditions, these shall be of watertight manufacture.

3.2.35 NON-STANDARD SINGLE PHASE SWITCHED SOCKET OUTLETS

The Subcontractor shall supply and install 15 Amp x 3 pin shaved pin "dedicated" or 13 Amp x 3 pin non-standard single-phase units, as specified, in the indicated positions. These shall not be protected by earth leakage relays.

3.2.36 THREE PHASE SWITCHED SOCKET OUTLETS

The Subcontractor shall supply and install 5 pin (3 phase and neutral and earth) 380 V metal clad units at 1500 mm AFFL unless noted to the contrary. These shall be complete with plug tops which are to be provided to the Employer for distribution.

All 3 phase units shall be protected by earth leakage relays.

3.2.37 HOT WATER CONTAINER INSTALLATION

All fixed storage water heaters shall be supplied and installed by others. The Subcontractor shall provide flush double pole isolators adjacent to these units and undertake their electrical connections.

No Sprague tubing shall be permitted.

Confirm final position of all units before commencing with conduit work as no extras will be allowed for alterations or making good resulting from lack of verification.

3.2.38 HEATERS

Unless otherwise specified, all heaters shall be supplied and installed by the Subcontractor in the positions and heights specified herein.

Should the Subcontractor be required to supply these units, written guarantees stating the manufacturers liabilities for faulty gear, and time periods of such guarantees shall be submitted promptly.

Where a specified product or manufacturer is listed, any other manufactured luminaire may be offered, provided such a product is equal or similar to that specified, and approved by the Employer and the Electrical Designer as such.

The position of all units shall be dependent on the final layouts and no work is to be undertaken until such final layout drawings become available.

3.2.39 UNDERFLOOR HEATING SYSTEMS

Unless otherwise specified, underfloor heating cables and equipment shall be supplied by the Subcontractor and shall include for the installation by a Specialist Supplier.

PVC insulated heating cables with ratings as specified shall be installed by the Specialist Supplier but connected by the Subcontractor who shall also be responsible for testing of the heating cables both prior on their being screed over, and immediately thereafter.

The underfloor heating cable cold tails shall be run via 20 mm or 25 mm bushed conduits at screed level to 100



x 100 x 50 mm flush connection boxes at 300 mm AFFL and 100 x 50 mm thermostat boxes at 1400 mm AFFL.

3.2.40 AIR CONDITIONING INSTALLATION

The Subcontractor shall provide the specified cables to the air conditioning plant and shall terminate on the main isolators therein.

Further specified conduit and cable interlinks and outlet boxes, as specified shall be installed by the Subcontractor, but all internal wiring interconnections is outside the scope of this contract and shall be undertaken by others.

The subcontractor shall provide and install the specified cable links to the chiller units and shall terminate these at the available main switches as provided by others. All further electrical work from these units to be undertaken by others.

The Subcontractor shall provide the preliminary connections to the single-phase AC heater equipment complete with 15 Amp 3 pin single phase dedicated switch socket outlet in ceiling voids attached to the P8300.

For the three phase AC units, the Subcontractor shall terminate the feeder cables of each unit within a 30 Amp TP isolator, and where necessary, weatherproof units shall be installed.

Where clarification is sought, the Subcontractor must liaise with the Electrical Engineer and the Mechanical Engineer.

All air conditioning units shall be supplied and installed by others.

3.2.41 STOVE AND COOKING APPLIANCES

All stoves and cooking appliances shall be provided by others, but shall be connected by the Subcontractor.

Domestic units shall be tubed in 25 mm diameter conduit unless noted to the contrary, to a local isolator adjacent at 1200 mm A.F.F.L and cable connection outlet behind the unit at appropriate heights and position.

Specific details regarding industrial units such as fryers, cooking pots, Bain marries etc., shall be given by the Mechanical Engineer.

3.2.42 MOTORS AND MACHINERY

Unless otherwise specified, all equipment shall be supplied and installed by others and shall be connected by the Subcontractor.

Specific details regarding wiring and the connection of this equipment shall be listed in the following "Scope of Works".

Motor control and starting equipment will generally, unless otherwise specified, be supplied by others but installed and connected by the Subcontractor, who shall however be required to provide the specified isolators.

The Subcontractor shall ensure the correct operation of all connected equipment in the company of the machine supplier and employer.

3.2.43 REFRIGERATION

The Subcontractor shall undertake to install the power provision to the refrigeration distribution board as noted in "Motor & Machinery" above, but all further interconnections shall fall outside the scope of this contract, and shall be undertaken by others.

3.2.44 EXTRACTOR FANS

Extractor fan units shall be supplied and installed by others unless specifically noted to the contrary.

The Subcontractor shall undertake their electrical connections as noted in this specification.

Where flameproof units are to be installed, the Subcontractor must utilize the appropriate flameproof terminations and fittings.

Single Phase Extractor Fans:

Small ceiling or wall units shall be connected to the local light circuits. The Subcontractor is to provide 5 Amp 3 pin socket outlets, adjacent.

Three Phase Extractor Fans:

The Subcontractor shall provide 30 Amp TP "On Load" isolators adjacent to all units which shall be connected by others.

3.2.45 BATTERY CHARGERS

Single phase battery charger units shall be provided with 3 Amp DP "On Load" isolators in the indicated positions at 1500 mm AFFL and cable connection outlets below isolators at 300 mm.

Three phase units shall be provided with 45 Amp TP "On Load" isolators and cable outlets as listed above, unless noted to the contrary.

The Subcontractor shall undertake the final interconnections of all charger units.

3.2.46 BURGLAR ALARM SYSTEM

Standard switched socket outlets shall be provided for the installation of these systems and the Subcontractor is to ensure that they are wired on the 24-hour circuitry.

Burglar alarm units shall be supplied and installed by others.

Where specified, the Subcontractor shall provide all indicated conduit provisions and outlets, and shall install non-rust draw wires, therein, and shall close off all outlets with approved blank cover plates.

3.2.47 INTERCOM AND PUBLIC ADDRESS SYSTEM

The Subcontractor shall provide all indicated low voltage conduit provisions and outlets, and non-rust draw wires unless requested to install the required wiring by the employer.

All specialized equipment shall be provided and installed by others.

Outlet boxes shall be fitted with approved cover plates.

3.2.48 TELEPHONE SYSTEM

The Subcontractor shall provide and install the telephone distribution boards in the indicated positions and shall allow for the installation of the 110 mm diameter sleeve to the site boundary.

All other internal interlinks shall be undertaken in 25 mm and 32 mm conduit unless specifically noted to the contrary.

Non-rust draw wires shall be provided in all sleeves and conduits and the Electrical Subcontractor shall ensure that these remain free of dirt and moisture.

The specified system is subject to the approval of Telecommunications Authorities and any modification as requested by them is to be undertaken expeditiously.

All distribution boards shall be fitted with solid softwood timber backings, and where required shall have pre-fitted space to house special GPO locks which shall be installed by the Telecommunications Engineers.

3.2.49 TELEPHONE MANHOLES

Where required, telephone manholes shall be situated along underground telephone routes. These shall be 500 x 500 x 500mm deep with cast iron metal covers and shall be supplied and installed by the Principal Contractor.

The Subcontractor shall assist in indicating the exact positions of all required manholes.

3.2.50 TV SYSTEM

All TV cables and equipment shall be provided and installed by a company specializing in this field. The Subcontractor shall provide all indicated low voltage conduits and outlets, complete with non-rust draw wires.

If required, weatherproof distribution boards, shall be installed, flush in all indicated positions. These shall house single phase switched socket outlets and which shall control the TV systems. 25mm conduits shall be led to the highest point, terminating in swan neck bends, to carry the future aerial conductors.

Outlet boxes shall be 100 x 100mm flush boxes and shall be installed at 300mm AFFL or as noted to the contrary, and closed off with approved cover plates.

The distribution boxes shall be fitted with hasp and staples and the Subcontractor shall provide padlocks with spare keys, and ensure that doors are locked once TV equipment has been installed.

3.2.51 COMPUTER SYSTEM

The Subcontractor shall provide the indicated conduit and power channel systems to accommodate future low voltage computer cables, complete with non-rust draw wires. The indicated non-standard switched socket outlets shall be powered from the designated distribution boards, and the Subcontractor shall ensure that these are installed in the required positions, and must verify this on site with the employer. Further details, regarding this system shall be listed in the attached "Scope of Works".

3.2.52 FLOOR SLAB OPENINGS

Where distribution boards are of the surface mounted type, the Subcontractor shall request the Principal Contractor to provide floor slab openings below for the future installation of necessary cables.

These openings shall be closed off with river sand and concrete topping once all cables have been installed, and after all cable entry sleeves have been suitably sealed.

3.2.53 EXTERNAL JOINT BOXES

Wherever external services (i.e. power, telephone, TV etc.) enter various buildings, transitions may be accomplished by means of weatherproof draw boxes, unobtrusively mounted at approximately 500mm above finished ground level.

These may be of the "Budgie Box" type with sealable weatherproof cover plates. Multiple services (i.e. power and low voltage systems) shall accommodate in separate boxes, adjacent to each other, wherever possible.

3.2.54 EMERGENCY EXIT SIGNS

Where required, the Subcontractor shall provide and install approved exit sign above doors, in the indicated positions, wired on the 24-hour system.

These shall contain nickel batteries which shall provide 100% light output for a period of 90 minutes during all power failures and shall be equal or similar to "LASCON Series E10" surface mounting.

3.2.55 DOOR LOCK CONNECTIONS

Low voltage electric door locks with transformers shall be provided and installed by the Subcontractor and who shall be required to provide the necessary transformers and control buttons in indicated positions, and shall undertake the necessary interconnections.

3.2.56 RIPLE RELAYS

The Subcontractor shall liaise with the Supply Authority to establish their requirements regarding municipal ripple relay units, and if required shall provide the necessary space in distribution boards, or ripple relay boxes in appropriate positions.

3.2.57 ELECTRICAL LEGEND AND CIRCUIT REFERENCE

The symbols shown in the attached drawings have been included purely as a guide to assist the Subcontractor in installing the various outlets in their correct positions and heights.

The circuit references used in the drawings and specifications shall have the following meaning:

E.g. E1/12 – Indicates that circuit shall be connected to distribution board "E" on circuit No. 12 connected to the 12-hour system where such system is listed.

All circuits marked with a double letter before the number shall be connected to the 24-hour system.

e.g. BB17 – Indicates that circuit shall be connected to the distribution board "B" on circuit No. 17 connected to the 24-hour system.

3.2.58 TRENCH REFILLING AND SOIL RECOMPACTION

The Subcontractor shall ensure the satisfactory re-compaction of all sleeve and cable trenches, in accordance to the latest standardized specification for Civil Engineering Construction (SABS 1200) and as requested by the site Civil Engineers.

The recommended method to be employed shall be as follows:

Cables and sleeving shall be laid within clean trenches

3.2.59 SURGE PROTECTION DEVICES

Installation of all surge protection devices shall be done in accordance with the wiring code SANS 10142-1:2008 edition 1.6 Annexure L which refers specifically to surge arrestors.

These shall be provided and installed by the Subcontractor in all the distribution boards, unless noted in the contrary.

3.2.60 CIRCUIT BREAKERS

All circuit breakers (CB's) and miniature circuit breakers (MCB's) shall be of CBI or ABB or equivalent manufacture, with all rupturing capacities as listed on the wiring diagrams. The minimum acceptable rupturing capacity is 5kA.

3.2.61 SPRAGUE TUBING

Standard metal flexible Sprague tubing shall not be utilized.

Where flexible connections are required (i.e. machine connections etc.) the Subcontractor shall use materials similar or equal to "Kopex" tubing or suitably approved flexible cables.

3.2.62 FIRE ALARM / DETECTION INSTALLATION

Inside all buildings, 20mm diameter PVC conduit, measured in the Bills of Quantities, shall be installed throughout and on a loop-in system for the ease of wiring from below the finished ceilings.

Flame retardant insulation shall be used in all conductors forming part of the fire protection reticulation.

Manual Call Point shall incorporate a key operation for testing purposes and in addition a hinged polycarbonate cover for protection against accidental activation of the unit.

3.3 SPECIFICATION PART 3: SCOPE OF WORKS**3.3.1 SCOPE OF CONTRACT**

The Principal contract, which is the Main Contractor's responsibility, comprises the erection of the buildings and execution of all works detailed in his contract.

The work described herein comprises the complete Electrical Installation for the proposed construction to the ESCCOM HEAD OFFICES, at EZULWINI, Hhohho district, Swaziland as well as the complete electrical cable reticulation indicated on the drawings and measured in the Bills of Quantities.

The works also allow for the installation of an underground telephone cable network from the Swaziland Post & Telecommunications Corporation

(SPTC) Telephone distribution board to the building indicated.

The work shall be complete with all materials and items of equipment necessary for the completion of the entire services whether specified in detail or not.

Tenderers are advised to visit the site to check this specification against the actual site conditions, and must report any discrepancies to the Electrical Designer **BEFORE** the date of tender opening.

3.3.2 IMPORTANT TENDERING REQUIREMENTS

All Tenderers shall be required to provide a fully completed "BILLS OF QUANTITIES" indicating the rate against every item, and shall serve as a basis for any additions to, or omissions from the specified electrical contract.

The Employer reserves the right to request a cost breakdown of any rate tendered before agreeing to the appointment of the Electrical Subcontractor.

3.3.3 IMPORTANT NOTES

The Subcontractor must refer to the attached "GENERAL AND TECHNICAL INSTRUCTIONS – SPECIFICATION PART 2" and accompanying drawings for details regarding items not listed in this section but obviously forming part of the total electrical subcontract.

All drawings accompanying this specification are PROVISIONAL AND DIAGRAMMATIC "ONLY". The Subcontractor must be in possession of the latest drawings and shall check with the Electrical Designer before putting work in hand on any section of this contract.

3.3.4 BALANCING OF POWER

The Subcontractor shall, on completion of this contract undertake the final load balancing at every distribution point, on full load conditions, and shall submit the results in writing to the Electrical Designer.

3.3.5 ELECTRICITY SUPPLY

The successful Tenderer shall immediately on appointment, register this contract and submit all necessary application forms and documentation to the Swaziland Electricity Company, for the supply and installation of an 11kV/415V bulk power connection.

The Subcontractor shall provide the 35mm² x 3 core 11kV XPLE cables to the indicated jointing position along the pavement to form the new ring main system, and shall undertake to terminate these cables at the SEC switchgear and transformers.

The removal of paving, trenching, re-compaction and making good along the pavement shall be undertaken by the Principal Contractor. The Subcontractor shall however, provide the protective channels and danger tape as per SEC's instruction.

The 11kV cable terminations shall be undertaken by suitably qualified personnel as employed by the Subcontractor. Insulation and pressure tests are to be undertaken and approved by the Electrical Engineer and Supply Authority before the system is re-energized.

No immediate cable jointing shall be permitted.

3.3.6 MAIN EARTH CONNECTIONS

The Subcontractor shall employ a specialised earthing company, under the direction of the Electrical Engineer, to establish the consumer's main earthing electrodes.

The maximum earthing resistance shall not exceed 1Ω.

An approved test certificate as witnessed by a technical representative of MA Dlamini Consulting Engineers shall be submitted to the Supply Authority on the successful completion of this installation.

3.3.7 EARTHING AND BONDING

The complete system shall be effectively bonded to earth in accordance to the latest "Code of Practice for the Wiring of Premises" SANS 10142, as well as the relevant bye-laws of Swaziland Electricity Company.

All feeder cables shall be provided with specified external bare copper earth conductors.

The Subcontractor shall provide bare copper earthing conductors throughout the installation excepting within the power skirting and channel systems, where these shall be insulated "Green" conductors only. Where specifically requested, separate insulated computer earthing conductors shall be provided.

3.3.8 MAIN POWER CABLES

The Subcontractor shall provide, install and terminate the listed low voltage main power cables, complete with cable glands and their specific bare copper earth wires.

External LV cables shall be installed squarely within ceiling spaces, attached to suitably size galvanized cable trays which shall be supplied and installed by the Subcontractor.

Suitably sized cable entry sleeves shall be provided wherever necessary, whether indicated or not.

Paralleled cables shall be spaced 100 mm apart throughout their route.

Refer to drawing No. 1016/EL/16 for details of main power cables.

3.3.9 IMPORTANT NOTE

The Subcontractor shall install all conduits, cables and services within the ceiling voids, unless specifically noted to the contrary.

This shall simplify the relocation of conduits and equipment if shop wall positions are to be altered at any future stage.

All equipment within the ceiling spaces shall be squarely, neatly and securely attached to the roofing structure.

3.3.10 WIREWAYS AND CHANNELING

The Subcontractor shall provide all external underground sleeves as indicated at their specified depths below finished ground level. All refilling and re-compaction of trenches shall be subject to the Civil Engineer's approval.

All surface wire ways and conduits shall be of metal manufacture only. PVC conduits may only be utilised in hidden areas i.e. within walls, surface beds, roof spaces etc.

The required channelling within the ceiling voids shall be galvanized metal manufacture with PVC cover plates, securely and squarely suspended at a minimum height of 250mm above the ceiling level. Maximum height not to exceed 500mm.

Where applicable, the Subcontractor shall liaise with the Air Conditioning Contractor to ensure the non-conflict of services, before work is to be put in hand.

3.3.11 CABLE LADDERS

Suitably sized heavy-duty galvanized cable ladders shall be provided in the cable ducts and ceiling voids to accommodate the required main feeder cables across their final routes. Ceiling mounted units shall be securely suspended from the overhead structures with sufficient heavy-duty hangers to carry their full weight, allowing for a 100% safety margin.

3.3.12 POWER SKIRTING SYSTEMS

The Subcontractor shall provide in the office areas three compartment tier power skirting equal or similar to "O-Line OL803" manufacture, coloured "Hospital Grey" unless instructed to the contrary.

Power skirting within the shopping areas shall be two compartments, three-way equipment of similar colour equal to "O-Line OL901" manufacture.

Outlets to ancillary equipment shall be specifically manufactured to fit the supplied power skirting.

3.3.13 DRAW BOXES

The Subcontractor shall provide sufficient draw boxes on all extended conduit runs to ensure that wiring is easily installed.

External units (if required) shall be of the weatherproof type, mounted at 500 mm above finished ground level unless noted to the contrary, and securely sealed off with approved non-rust cover plates.

3.3.14 WIRING

The Subcontractor shall refer to drawings or BOQ for details of the minimum sized wiring and cables to be utilized throughout the site.

Innovative wiring systems may not be employed unless specifically approved by the Electrical Engineer or his representative.

3.3.1 INTERNAL COVER PLATES

All internal cover plates shall be of equal colour and manufacture throughout the site.

3.3.2 IMPORTANT NOTE

All equipment within the ceiling spaces shall be squarely, neatly and securely attached to the roofing structure. No conduits, cables and wire ways may be laid or attached to the ceiling structures.

3.3.3 METERING

The local supply authority is Swaziland Electricity Company (SEC) shall provide single bulk supply metering equipment to monitor the total electrical energy consumption.

The Employer/Landlord shall monitor the consumption of all individual tenants and shall issue accounts in accordance to the latest tariff rates as approved by SEC.

3.3.4 POWER DISTRIBUTION BOARDS

The Subcontractor shall supply and install in the indicated positions, the following distribution boards as specified herein and shall implement their manufacture immediately on appointment to ensure their timely site delivery.

Detailed shop drawings shall be submitted for approval to the Electrical Designer and Supply Authority (where applicable) **BEFORE MANUFACTURE MAY PROCEED.**

Flush mounted backing trays shall be mild steel hot dip galvanized or the other approved non-rust materials.

External units (where required) shall be constructed of heavy-duty galvanized sheet metal or approved non-rust materials.

The Subcontractor shall provide recessed trays behind all surface mounted units to accommodate the flush conduits.

The mounting height of all power distribution boards shall be measured 2000 mm AFFL from the top of units. Smaller units shall be measured at 1500 mm AFFL from bottom of units but shall not exceed 2000 mm from the top.

3.3.15 TELEPHONE SYSTEM

The proposed system must be confirmed with the Swaziland Post & Telecommunication Corporation before work is to be put in hand.

All modifications as requested by them shall be undertaken expeditiously.

The Subcontractor shall provide the indicated underground 110mm diameter sleeving installation from the site boundary to the new telephone room and shall interlink the existing telephone manhole to allow for the necessary cable modifications. All sleeves and conduits shall remain free of dirt and moisture and shall be provided with non-rust draw wiring. The Principal Contractor shall be required to provide all additional telephone manholes measuring 500mm x 500mm x 600mm deep, complete with heavy duty manhole covers.

All underground sleeves shall be buried at 500 mm below finished ground level and suitably refilled and re-compacted to the approval of the site Civil Engineer.

The Subcontractor shall provide surface mounted distribution boards in service cupboards, all interconnected by means of P9000 galvanized channel risers.

Surface units within shops and offices shall be provided with P9000 white channel risers to the ceiling voids, and where indicated, interlinked to the upper levels with similar equipment.

3.3.16 DATA SYSTEMS

The Subcontractor shall provide surface mounted data distribution boards at indicated positions, with P9000 channel risers to the ceiling voids interlinked to the upper levels with similar equipment, as required.

3.3.17 EXTERNAL SECURITY LIGHTS

The external security system shall be operated by the remote photo electric daylight switch. These to be

connected to the general distribution boards (non-emergency section).

1.5mm² x 2 core control cables to interlink all relevant general distribution boards.

3.3.18 LUMINAIRE

Instructions to purchase the specified units, once tenant details are known, shall be issued to the Subcontractor who shall immediately place these orders for timeous delivery to site, and shall fully undertake their installation and connections within the specified final positions.

The Subcontractor shall provide written guarantees stating the manufacturers' liabilities for replacing faulty gear, and time periods of such guarantees shall be submitted promptly.

The Subcontractor shall provide 5 Amp single phase socket outlets in the ceiling spaces for the installation of all light fittings, in their final required positions.

Details of preliminary luminaire to be provided as described in **the Drawings**.

3.3.19 LIGHT SWITCHES

The Subcontractor shall provide and install all single-phase light switches, rated at 15 Amps, in flush 100mm x 50mm boxes mounted at 1200mm unless noted to the contrary.

All single-phase light switches shall, rated at 15 Amp, and shall be housed in flush 100 x 50 mm boxes.

Where multiphase switching occurs at common positions the Subcontractor shall install separate boxes per circuits, spaced 25mm apart.

3.3.20 MASTER KEY SWITCH SYSTEM

The Subcontractor shall provide and install 100 x 100 mm flush wall double pole key switch units with removable keys at 1200 mm AFFL in positions to be confirmed on site.

These shall control the indicated circuitry via contactors within their respective distribution boards.

3.3.21 PHOTO ELECTRIC DAYLIGHT SWITCH

The Subcontractor shall provide install the photo electric daylight switches at the indicated positions at high level to operate the external security light circuits via contactors within their respective boards.

These shall be of the round box mounted type or alternatively standard units mounted within a transparent box and shall be of the 'Fischer Pierce' manufacture.

3.3.22 SINGLE PHASE ELECTRIC SOCKET OUTLETS

Provide and install the socket outlets as specified in the BOQ.

3.3.23 AIR CONDITIONING INSTALLATION

The subcontractor shall provide and install the specified cable links to the chiller units and shall terminate these at the available main switches as provided by others.

All further electrical work from these units to be undertaken by others.

The Subcontractor shall provide the preliminary connections to all indicated equipment as listed herein. All final connections to be undertaken by others.

3.3.23.1 SINGLE PHASE AC HEATER PROVISIONS

Surface mounted 15 Amp 3 pin single phase dedicated switch socket outlet in ceiling voids. Units to be attached to the provided P8300 channel system.

3.3.23.2 SINGLE PHASE AC HEATER PROVISIONS

The Subcontractor shall terminate the feeder cables of each unit within a 30 Amp TP isolator, and where necessary, weatherproof units shall be installed.

Tenderers are advised to allow for the supply and installation of 4mm² x 4 core copper cables and 2.5mm² bare copper earth wires to all units. Final required sizes to be confirmed during the course of construction.

3.3.24 EXTRACTOR FANS

All equipment shall be installed and connected by other, unless noted to the contrary.

3.3.28.1 SINGLE PHASE EXTRACTOR FANS (if required)

Small ceiling or wall units shall be connected to the local light circuits. The Subcontractor to provide 5 Amp 3 pin socket outlets.

3.3.28.2 THREE PHASE EXTRACTOR FANS

The Subcontractor shall provide 30 Amp TP "On Load" isolators adjacent to all units which shall be connected by others.

Emergency units within the stairwells shall be connected to the emergency distribution boards.

3.3.25 HOT WATER CYLINDERS

All hot water cylinders shall be supplied and installed by others.

The Subcontractor shall confirm their final positions on site before putting work in hand.

Provide correctly sized isolators adjacent and undertake their final interconnection with solid conduit or cable interlinks.

Sprague tubing shall not be permitted.

3.3.26 ELECTRIC SIGNS

The Subcontractor shall provide the pre-wired outlets suitably blanked off for the future connection to the electric signs.

Connection to units shall fall outside the scope of this contract unless instructed to the contrary.

The Subcontractor is advised to provide the pre-wired under canopy and fascia outlets within the internal ceiling space until sign units have been installed in order to prevent unnecessary penetrations to the shop window structure.

All neon signs shall be protected by fireman switches mounted 2400mm AFFL.

3.3.27 WINDOW LIGHT PROVISIONS

Provide prewired and designated enclosed outlets on power channels within the ceiling voids for future connection of luminaire by others.

3.3.28 THREE PHASE MACHINE CONNECTIONS

The Subcontractor shall provide the specified feeder cable to all indicated machine points and shall terminate these at suitably sized "On Load" isolators or available control panels as provided by others.

3.3.29 LIGHTNING PROTECTION SYSTEM

The Subcontractor shall appoint a specialized company as chosen by the Electrical Designer to undertake the lightning protection of the main building.

The Subcontractor shall ensure that they are called onto site in good time to establish their earthing electrodes and final connections.

Permission has been obtained from the Structural Engineers to enable the specified company to utilize the horizontal steel reinforcing for their ground floor terminations.

Where necessary the Subcontractor shall provide flush 25mm conduits for the installation of hidden earthing conductors.

A provisional sum for this work has been allowed for in the attached "Bill of Quantities". A test certificate witnessed by a technical representative of the Electrical Designer shall be submitted to the Employer on the successful completion of this installation.

The maximum earthing resistance shall not exceed 1Ω.

3.3.30 STANDBY EMERGENCY GENERATOR

The Subcontractor shall appoint a specialized company as chosen by the Electrical Engineer to supply and install an 315 kVA free standing, sound proof, weatherproof diesel operated AVR constant voltage emergency standby generator set, and undertake the incoming and outgoing cable interlinks as indicated.

A provisional sum for the equipment has been allowed for in the attached "Bill of Quantities".

3.3.31 ELECTRIC BELL SYSTEM (IF REQUIRED)

The Subcontractor shall provide and install the indicated bell call systems.

Where more than one unit is to be fitted within a single shop, the Subcontractor must ensure that these provide distinct separate sounds to allow for easy identification.

3.3.32 ELECTRIC HAND DRIERS

All electric hand driers shall be supplied by others and installed and connected by the Subcontractor at 1400mm AFFL.

The Subcontractor shall provide outlet boxes behind units and 20 Amp DP flush isolator directly above, below the ceiling height.

All units shall be protected by earth leakage devices.

3.3.33 LIFTS

The Subcontractor shall provide 16mm² x 4 core cable plus 10mm² bare copper earth wires to all escalator units terminating in 60 Amp TP "On Load" isolators adjacent to the motor equipment. These are to be provided from appropriate general distribution boards.

Lift motor units shall be provided with 10mm² x 4 core copper cables plus 6mm² bare copper earth wires, terminating in 40 Amp TP "On Load" isolators adjacent to the motor equipment.

These are to be provided from appropriate emergency distribution boards.

The Subcontractor shall provide standard distribution boards in all appropriate positions to provide power for the local switched socket outlets and lift lighting.

All final connections to the lifts are to be undertaken by others.

Units to be fitted with the following equipment rated at 5kA rupturing capacity.

Main Switch: 30A DP "On Load" isolator.

Lights: 2 x 10A SP circuit breakers

Socket Outlets: 1 x 20A SP circuit breaker type earth leakage relay

3.3.34 TEST CERTIFICATES

On the successful completion of this contract, the Subcontractor shall provide copies of the approved SEC test certificates to the Employer and Electrical Engineer, if such tests are undertaken.

Alternatively, approved "Certificate of Compliance" with measurements recorded at each distribution board shall be issued to the Supply Authority, Employer and Electrical Engineer.

SCHEDULE OF QUANTITIES

ELECTRICAL INSTALLATION

ESCCOM HEAD OFFICE IN EZULWINI

SECTION 4 SCHEDULE OF QUANTITIES



SCHEDULE OF QUANTITIES

ELECTRICAL INSTALLATION

ESCCOM HEAD OFFICE IN EZULWINI

3.1 PREAMBLE TO SCHEDULE OF QUANTITIES

1. This Schedule of Quantities forms part of the Contract Document and shall be read in conjunction with all other documents which form part of the contract documents.
2. The Schedule of Quantities form part of and must be read in conjunction with the Specification, Drawings, and Tender documents which documents contain the full descriptions of the work to be done and material and equipment to be used and unless otherwise described in the Schedule of Quantities, reference should be made and materials and equipment to be used in this service.
3. The rates and prices inserted in the Bill of Quantities shall be the full inclusive rates and prices shall (except where otherwise specified), include the handling, cleaning, installation, commissioning, testing, maintenance, overhead charges, general sales tax, profit as well as the general liabilities, obligations, and risks set forth or implied in the contract documents.
4. The overhead charges and profit shall be spread proportionally over the rates of the relative items of the Bill of Quantities. The contractor shall have no claim for any further payment in respect of the work or method of execution, which may be described or implied in the contract although apparently no corresponding item is given in the Schedule of Quantities.
5. Only major items have been scheduled in the Bill of Quantities but the work shall be provided complete and all items necessary for complete and all items necessary for completion of the service in its entirety shall be allowed for and provided by the contractor, whether specified in detailed or not, and no extra price will be considered for the provision thereof unless detailed by the contractor in a covering letter submitted with this tender.
6. The price or rate shall be entered against each item in the Schedule of Quantities whether the quantities are stated or not. Items against which no price or rate is entered by the Contractor will be paid for when executed but will be considered as covered by other prices and rates in the Bill of Quantities.
7. General directions and descriptions of plant, equipment, materials and work given in the specification are not repeated in the Bill of Quantities and reference shall be made to the specifications, drawings, and tender documents for this information.
8. No alteration, erasure or addition is to be made in the text of the schedule of quantities will be adhered to. Any rates or prices altered by the tenderer shall be initialled.
9. The priced schedule of quantities of the successful tenderer will be checked and the Engineer reserves the right to call for adjustment to any individual price and to rectify any discrepancy whilst the total tender price, as submitted, remains unaltered provided that if the scope of the project is scaled up or down, the tender price shall be altered by the Engineer to suit the employer's requirements.
10. The works as executed will be measured for payment in accordance with the methods described in the contract notwithstanding any custom to the contrary. The net measurement or weight of the finished work in place will, unless otherwise specified, be used as a basis for payment.



SCHEDULE OF QUANTITIES

ELECTRICAL INSTALLATION

ESCCOM HEAD OFFICE IN EZULWINI

11. **Note:** In the Bill of Quantities, Specifications and Drawings reference may be made to equipment, which shall be preferred. This is for technical reasons. Similar alternatives may be offered in a covering letter but the prices and rates shall be for equipment as specified.
12. The quantities in this schedule of quantities are not to be used for ordering material.
13. Variation in the scope and extent of the work included in the schedule shall be allowed to meet the Employer's requirements and shall be measured and cost at rates entered in the schedules where appropriate, and shall form an additional or deduction from the total of the schedules. Any item or variation for which rates have not been included in the schedule shall be agreed and priced as non-scheduled items in accordance with the provision of the contract. The rules governing the extent and costing of the variation shall be those provided for in the form of conditions of contract.
14. All provisional sum and prime cost (PC sums), shall be expended as directed by the Engineer and any balance remaining shall be deducted from the amount of the correct sum.
15. All items described as "Provisional" or "PC Sum" shall be measured as executed and paid for according to prices in the schedule of quantities and any unexpended amounts shall be deducted from the contract sum. No work for which "Provisional" items or "PC Sums" are provided shall be commenced without written instructions from the Engineer.
16. These bills of quantities contain pages numbered consecutively. Before the tenderer submits his tender he should check the number of pages, and if any are found missing or duplicated, or the figures or writing indistinct, or the bill of quantities contain any obvious errors, he should apply to the Engineer at once and have same rectified, as no liability whatsoever will be admitted by the Engineer in respect of errors in tender due to the foregoing.



SCHEDULE OF QUANTITIES

ELECTRICAL INSTALLATION

ESCCOM HEAD OFFICE IN EZULWINI

3.2 BILLS OF QUANTITIES



SECTION 5 FORMS AND INFORMATION SCHEDULES



5.1 ANNEXURE A – FORM OF TENDER



FORM OF TENDER

*This document is for use with
JBCC PRINCIPAL, NOMINATED/SELECTED AND MINOR WORKS AGREEMENTS
Published prior to the introduction of the "Contract Data" forms*

PROJECT	
PRINCIPAL AGENT or AGENT	
EMPLOYER	
TENDERER	
WORKS DESCRIPTION	FILE CODE
TENDER CLOSING DATE	TIME

prepared by the **JOINT BUILDING CONTRACTS COMMITTEE Inc**

RECOMMENDED BY THE JBCC CONSTITUENTS
Association of Contract Project Managers
Association of South African Quantity Surveyors
Master Builders South Africa
South African Association of Consulting Engineers
South African Institute of Architects
South African Property Owners Association
Specialist Engineering Contractors Committee



CODE 2115 © August 2007



FORM OF TENDER in terms of a:

Principal Building Agreement (yes/no)
N/S Subcontract Agreement (yes/no)
Minor Works Agreement (yes/no)

<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>

Principal Agent _____
 Street address _____
 Tel _____ Fax _____ E-mail _____
 Employer _____
 [N/S only] Contractor _____
 Tenderer _____
 Postal address _____
 Tel _____ Fax _____ E-mail _____
 Project _____
 Works _____

1.0 CONDITIONS OF TENDER

1.1 PRINCIPAL, NOMINATED/SELECTED AND MINOR WORKS AGREEMENTS

- 1.1.1 The successful tenderer will be appointed in terms of the JBCC Principal Building Agreement, JBCC N/S Subcontract Agreement or JBCC Minor Works Agreement
- 1.1.2 Additions and alterations to such agreement are clearly detailed in the schedule of the agreement
- 1.1.3 All pre-tender information is set out in the Schedule. Variables requiring selection by the tenderer are to be clearly marked for later inclusion in the Schedule
- 1.1.4 Any conditions or qualifications that are appended by the tenderer, which are at variance with the conditions in this or the tender enquiry document, may invalidate the submitted tender
- 1.1.5 Details of the amount of item 2.4.2 of tender sum are to be clearly designated in the tender documentation provided by the principal agent or agent
- 1.1.6 This tender is to be submitted to the principal agent or agent at the street address stated above before the tender closing date and time stated on the cover hereof
- 1.1.7 Tenders will be opened in public directly after the stated closing time. Only the total tender sum as stated in 2.4.5 of each tender will be announced
- 1.1.8 The lowest or any tender will not necessarily be accepted

1.2 NOMINATED / SELECTED SUBCONTRACT AGREEMENT ONLY

- 1.2.1 The contractor has been or will be appointed in terms of the JBCC Principal Building Agreement
- 1.2.2 Where the tenderer is advised of the appointment of the contractor after submission of this tender, the tenderer shall be entitled to make reasonable objection to being appointed by the contractor
- 1.2.3 This tender is submitted to the principal agent or agent who is authorised in terms of the Principal Building Agreement to instruct the contractor to appoint the successful tenderer as a nominated/selected subcontractor



2.0 THE TENDER

- 2.1 By the submission of this tender to the employer the tenderer offers and agrees to contract for, execute and complete the works/subcontract works for the tender sum as stated below
- 2.2 This tender shall remain in full legal force for forty-five (45) calendar days from the tender closing date in the case of Principal or Nominated/Selected Contracts and thirty (30) calendar days for Minor Works Contracts. The tenderer accepts liability for damages as may be suffered by the employer should the tender validity period not be honoured
- 2.3 This tender takes into account the documents listed hereunder or as per the attached addendum by the principal agent or agent for the purpose of preparing and submitting this tender

Document list or addendum identification
--

2.4 TENDER SUM COMPILATION

	Amount
2.4.1 Tenderer's work including Prime Cost and Provisional Amounts	
2.4.2 Budgetary allowances [amount stated by the principal agent / agent]	
2.4.3 SUB TOTAL	
2.4.4 Add tax on 2.4.3	
2.4.5 TOTAL TENDER SUM inclusive of tax	

Tender Sum in words _____

2.5 TENDERER'S SELECTIONS (Fill in Yes, No, Nil as appropriate. Do not leave blanks)

Selection Item		PBA	N/S	Minor	Addendums, N°/s, Marked
Preliminaries	Payment	Alternative A			
		Alternative B			
	Adjustment	Alternative A			
		Alternative B			
Security	Variable construction guarantee				
	Fixed construction guarantee				
	Retention (Payment reduction)				
	#	Advance payment guarantee			(Amount)
	#	Payment guarantee			(Amount)

These guarantees are not applicable to State appointments

Thus done and signed at _____ on _____

Name of signatory	Capacity of authorised signatory
As witness	for and on behalf of the tenderer who by signature hereof warrants authorisation hereto



FORMS & INFORMATION SCHEDULES

ELECTRICAL INSTALLATION

ESCCOM HEAD OFFICE IN EZULWINI



5.2 ANNEXURE B – APPENDIX TO FORM TENDER

NB: THIS APPENDIX FORMS PART OF THE TENDER

	Clause	
Amount of variable Guarantee:	14	10% (Ten percent) of the n/s Contract Value
Time within which Guarantee to be provided	14	21 (Twenty-One) days of written acceptance
Duration of Guarantee	14.2	Until one month after the expiry of the Defects Liability Period.
Time within which works to be commenced	15	In terms of the programme
Programme to be furnished within:	15	Not Required
Special Risks insurance	11	One Million Emalangenzi (E 1,000,000)
Minimum amount of Third-Party Insurance	10	16 (Sixteen) Calendar months
Time for completion	25	E10, 000.00 Per Calendar Day
Amount of Penalty	30	Not Applicable (Fixed Price)
Contract Price Adjustment	32	Not Applicable (Fixed Price)
Percentage Retention	25	5% (Five percent)
Limit of Retention money	25	5% (Five percent of contract value)
Defects Liability Period	26	In terms of the principal agreement
Settlement of disputes to be by ref to	40	Arbitrator in eSwatini
Period of Tender Validity	45	45 (Forty-Five) days from closing date for submission of tenders

Date.....

Signature:

On behalf of:



5.3 ANNEXURE C – AUTHORITY FOR SIGNATORY

The Tenderer shall attach to this page a resolution from the Board of Directors, duly signed, dated, stamped and witnessed, establishing authority for the Tender signatory.



5.4 ANNEXURE D – SURETIES

The Tenderer should attach to this page a letter from a Bank or an Insurance Company confirming that they are prepared to enter into a bond at the time the contract is signed for the due performance of the said contract. The amount of the bond is to be limited to five (5) percent of the Contract Price.



FORMS & INFORMATION SCHEDULES

ELECTRICAL INSTALLATION
ESCCOM HEAD OFFICE IN EZULWINI

5.5 ANNEXURE E – SCHEDULE OF CURRENT WORK

The Tenderer shall indicate in the Schedule below the work being carried out by him at the present time. Absence of this statement may prejudice the Tender as being submitted by an inexperienced Contractor.

Full Title	Project	Employer and Contact Details	Value of Work	% Finished to Date	Completion Date	Name of Engineer & Contact Details

Date:

Signature of Tenderer:



5.6 ANNEXURE F – DETAILS OF PREVIOUS PROJECTS

The Tenderer shall attach to this page, details of work of a similar nature and magnitude that he has completed during the last three (3) years.

Details shall include the following:

- Project title, location and value;
- Contract duration and date completed;
- Name of Employer and contact details;
- Name of Engineer and contact details;
- If the tenderer was a member of a joint-venture, partnership or other form of association, then the names and contact details of all partner companies should be included.

The Employer reserves the right to contact any of the companies involved in the projects listed under this section for independent confirmation and references.

5.7 ANNEXURE G – CONTRACTOR'S SUPERINTENDENCE

With reference to Clause 7 of the General Conditions of Contract, the Tenderer shall give below the names of proposed site management staff together with a brief summary of their experience.

Name	No. of Years Employed by Tenderer	Brief Summary of experience
Contract's Manager:		
Site Agent:		
Foremen:		

Tenderers should note that further information to support that submitted in this schedule may be requested during the tender adjudication.



5.8 ANNEXURE H – SCHEDULE OF PLANT

The tenderer shall list below all items of plant that would be mobilised for the project. He shall clearly state for each item the name of the owner and country of registration.

Description	Quantity	Name of Owner	Country of Registration

Tenderers should note that further information to support that submitted in this schedule may be requested during the tender adjudication.

5.9 ANNEXURE I – ALTERATIONS BY TENDERER

Should the Tenderer desire to make any departures from or alterations to the General Conditions of Contract, the Special Conditions of Contract, Specifications, Schedule of Quantities or Drawings, or to qualify his Tender in any way, he shall set out his proposals clearly hereunder or alternatively state them in a covering letter attached to his Tender and referred to hereunder, failing which the Tender shall be deemed to be unqualified.

Page	Clause or Item

Date:

Signature of Tenderer:



5.10 ANNEXURE J – CONTACT INFORMATION

The Tenderer is requested to provide the information listed below. This information does not form part of the Contract.

Company Name:

Postal Address:

.....

.....

Telephone:

Fax:

Mobile:

Email:

Physical Address:

.....

.....

.....

.....

Contact Name:

Director in Charge:



5.11 ANNEXURE K – JOINT VENTURE/PARTNERSHIP AGREEMENT

In the event that the tender is submitted by a joint venture, partnership, association or any other form of association between two or more companies, then a copy of the agreement binding the parties shall be attached to this page. The agreement must clearly indicate the following:

- Profit share arrangements between the parties;
- Management structure;
- Source of all resources to be committed to the project.

On behalf of:



5.12 ANNEXURE L – CERTIFICATE OF INSPECTION OF SITE OF WORKS

TENDER No. ESCCOM/TS/003/2020-2021/1902E
TENDER Name: ELECTRICAL INSTALLATION FOR ESCCOM HEAD OFFICE DEVELOPMENT

I/we, representing.....
.....,

do hereby certify that I/we have visited and inspected the site of the works.

Signed, this.....day of.....2015

Tenderer's signature

Tenderer's Telephone Number

Tenderer's address

.....

.....

Engineer's Signature..... Date.....



5.13 ANNEXURE M – DECLARATION OF ELIGIBILITY FORM

DECLARATION OF ELIGIBILITY

[The Service Provider must provide a signed declaration on its company letterhead in the following format. If the Proposal is being presented by a joint venture or consortium all members must each sign their own declaration.]

[>>>Name of Service provider, Address, and Date>>>]

To: The Tender Board, Eswatini Communications Commission, Mbabane Office Park P.O. Box 7811, Mbabane

Dear Sirs,

Re: Tender Reference: **ESCCOM/TS/003/2020-2021/1902E**

We hereby declare that: -

- (a) We, including any joint venture partners or consortium partners, are a legal entity and have the legal capacity to enter into the contract;
- (b) We are not insolvent, in receivership, bankrupt or being wound up, our affairs are not being administered by a court or a judicial officer, our business activities have not been suspended, and we are not the subject of legal proceedings for any of the foregoing;
- (c) We have fulfilled our obligations to pay taxes and social security contributions;
- (d) We have not, and our directors or officers have not been convicted of any criminal offence related to our/their professional conduct or the making of false statements or misrepresentations as to their qualifications to enter into a contract within a period of five years preceding the commencement of the procurement proceedings;
- (e) We do not have a **conflict of interest** in relation to the procurement requirement;
- (f) I/We have not been convicted of any criminal offence relating to professional conduct or the making of false statements or misrepresentations as to its qualifications to enter into a procurement contract within a period of five years preceding the commencement of procurement proceedings;
- (g) I/We are not subject to suspension in accordance with Section 55, and none of our directors or officers faces endorsement or have already been endorsed on the Register for Tender Defaulters in accordance with the Prevention of Corruption Act, 2006.

Signed

Authorized Representative

Date



SECTION 6

JBCC CONTRACT AGREEMENT

Contract documentation is included in this section for information only,
And should not be completed by the Tenderer



SECTION 7 DRAWINGS

