

**PROPOSED BUFFALO PLAZA ON PLOT L.R. NO. 37/262/1
NAIROBI WEST-NAIROBI COUNTY**

FOR

NYATI SACCO LIMITED

SPECIFICATIONS AND BILLS OF QUANTITIES

FOR

SUPPLY, INSTALLATION, TESTING AND COMMISSIONING

OF

CCTV & ACCESS CONTROL INSTALLATION WORKS

ARCHITECT

Dama Services Limited,
P.O. Box 9656-00100
Nairobi
Email:damaservices@gmail.com

ELECTRICAL ENGINEER

FluidSystem Engineers Limited,
P.O. Box 41309-00100
Nairobi
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QUANTITY SURVEYOR

Integra Consulting Limited
P.O. Box 27974-00100
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MECHANICAL ENGINEER

Fluidsystem Engineers Limited,
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STRUCTURAL ENGINEER

Inticom Limited
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CLIENT

Nyati Sacco,
P.O. Box 7601 –
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JANUARY, 2022

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SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF CCTV &
ACCESS CONTROL INSTALLATION WORKS

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DEFINITIONS

The following terms and expressions used in the contract document shall have the following meanings:

The Employer: Nyati Sacco
Represented by: Board of Management

ARCHITECT shall mean Dama Services Limited

ELECTRICAL ENGINEER shall mean Fluidsystem Engineers Limited,

QUANTITY SURVEYOR shall mean Integra Consulting Limited

MECHANICAL ENGINEER shall mean Fluidsystem Engineers Limited,

STRUCTURAL ENGINEER shall mean Inticom Limited

Employer's representative: This shall mean the Project Manager and shall be Dama Services Limited,

Main contractor The firm appointed to carry out the builders works.

Contractor: The firm appointed to carry out the supply, delivery, installation, testing and commissioning of CCTV & ACCESS CONTROL Installation works

Site: Nairobi

NOTES TO ALL TENDERERS;

1. The tenderer is required to check the number of pages in this document and should any be found to be missing or the figures indistinct, he must inform the Engineer at once and have the same rectified. Should the tenderer be in doubt the precise meaning of any item, word or figure. Or for any reason whatsoever observe any apparent omission of words or figures, he must inform the Engineer in order that the correct meaning may be decided upon before the date for the submission of the tenders.
2. No liability whatsoever will be admitted nor claim allowed in respect of errors in the completed tender due to mistakes in this document which should have been rectified in the manner described above.
3. The tenderer shall not otherwise qualify the text of this specification. Any alteration or qualification made without authority will be ignored and the text of the specification as printed will be adhered to.
4. The tenderer shall be deemed to have made allowances in his unit prices generally to cover items of preliminaries or additions to prime cost Sums or other items. If those have not been priced against the respective items.
5. The tenderer's price shall include all government taxes including duties, VAT, etc which must be included in the rates. No claims whatsoever will be allowed in respect of duties, VAT etc if the tenderer does not price them as aforementioned.
6. In no case will expense incurred by the tenderer in preparation of this tenderer be reimbursed.
7. The copyright of this specification is vested in the Engineer and no part thereof may be reproduced without their express permission, given in writing.
8. The Sub-Contractor shall be solely responsible for the accurate ordering of materials in accordance with the drawings and these specifications.
9. The specifications must be priced in Kenya Shillings
10. This is a fixed price Contract and no claims shall be entertained on whatever ground. The sub-contractor is advised to include all such costs as he projects may arise in his unit rates. Any variations in the exchange rate will also be no excuse for any variations in the contract sum.

Signed (As in form of Tender)

Date/Stamp

FORM OF TENDER

To: The Chief Executive
Officer, Nyati Sacco,
P.O. Box 7601 –
00200 NAIROBI

Dear Sir,

**SUPPLY, DELIVERY, INSTALLATION, TESTING AND COMMISSIONING OF SUPPLY,
INSTALLATION, TESTING AND COMMISSIONING OF CCTV & ACCESS CONTROL
INSTALLATION WORKS FOR THE PROPOSED CONSTRUCTION OF BUFFALO PLAZA
ON LR 37/262/1**

1. In accordance with the Instructions to Tenderers, Conditions of Contract, Specifications and Bills of Quantities for the execution of the above named Works, we, the undersigned offer to construct, install and complete such Works and remedy any defects therein for the sum of:

Kshs *[Amount in figures]*

Kenya Shillings.....*[Amount in words]*

2. We undertake, if our tender is accepted, to commence the Works as soon as is reasonably possible after the receipt of the Employer’s Representative’s notice to commence, and to complete the whole of the Works comprised in the Contract within the time stated in the Appendix to Conditions of Contract.

3. We agree to abide by this tender for a period of 120 days from the date of tender opening and shall remain binding upon us and may be accepted at any time before that date.

4. Unless and until a formal Agreement is prepared and executed this tender together with your written acceptance thereof, shall constitute a binding Contract between us.

5. Understand that you are not bound to accept the lowest or any tender you may receive.

Dated this day of20.....

Signaturein the capacity of

duly authorized to sign tenders for and on behalf of:

.....*[Name of Tenderer]*

of*[Address of Tenderer]*

FORM OF TENDER SECURITY

WHEREAS

.....(her einafter called "the Tenderer") has submitted his tender dated For the supply, delivery, installation, testing and commissioning of cctv & access control Installation for the Proposed Construction of Buffalo Plaza on 37/262/1

KNOW ALL PEOPLE by these presents that WE Having our registered office at (hereinafter called "the Bank"), are bound unto (hereinafter called "the Employer") in the sum of Kshs..... for which payment will and truly to be made to the said Employer, the Bank/Insurance binds itself, its successors and assigns by these presents sealed with the Common Seal of the said Bank thisDay of20

THE CONDITIONS of this obligation are:

- 1. If after tender opening the Tenderer withdraws his tender during the period of tender validity specified in the instructions to Tenderers Or 2. If the Tenderer, having been notified of the acceptance of his tender by the Employer during the period of tender validity: (a) fails or refuses to execute the form of Agreement in accordance with the Instructions to Tenderers, if required; or (b) fails or refuses to furnish the Performance Security, in accordance with the Instructions to Tenderers;

We undertake to pay to the Employer up to the above amount upon receipt of his first written demand, without the Employer having to substantiate his demand, provided that in his demand the Employer will note that the amount claimed by his is due to him, owing to the occurrence of one or both of the two conditions, specifying the occurred condition or conditions.

This guarantee will remain in force for a period of 150 days from the date of tender opening, and any demand in respect thereof should reach the Bank not later than the said date.

..... (Date)

..... (Signature of the Bank)

..... (Witness)

..... (Seal)

PART A:

PRELIMINARIES AND GENERAL CONDITIONS

PART A - PRELIMINARIES AND GENERAL CONDITIONS

NAMES OF PARTIES

The following will be inserted in the Articles of Agreement:-

Architects:	AS PER MAIN WORKS
Engineer:	AS PER MAIN WORKS
Employer:	AS PER MAIN WORKS

2. DEFINITIONS OF TERMS

The terms, phrases and abbreviations shall be deemed to have the following meanings wherever used hereinafter and in all contract documents.

“Engineer” shall in the Electrical works mean ‘**project Electrical engineer**’ and, or in the event of any of their deaths, or ceasing to be the Engineers for the purposes of this Sub-contract, such other person as the client shall nominate for that purpose. For the purpose of **Electrical** engineering works the Engineer shall be deemed vested with the duties of, and be the representative of the Architect, except on respect of variations which involve the sub-contract sum.

“Main Contractor” shall mean the person or persons, partnership, firm or company, whose tender for the main contract has been accepted, and who has or have, signed the main contract and shall include his or their heirs, executors, administrators, assigned successors and duly appointed representatives. For the purposes of this work, the terms “Main Contractor” and “Contractor” shall have the same meaning.

“Sub-Contractor” shall mean the person or persons, partnership, firm or company, whose tender for the sub-contract for the electrical and mechanical works has been accepted, and who has or have, signed the sub-contract and shall include his or their heirs, executors, administrators, assigned successors and duly appointed representatives.

“Works” shall mean all or part of the works, material and articles, wherever the same are being manufactured or prepared, which are to be used in the execution of this sub-contract and whether the same may be on the site or not.

“Approved” shall mean approved by the Engineer/Architect at his absolute discretion.

“Directed” shall mean directed by the Engineer/Architect at; his absolute discretion.

“Selected” shall mean selected by the Engineer/Architect at his absolute discretion.

“M³” shall mean cubic metre

“M²” shall mean square metre

“M” shall mean linear millimetre

“Kg” shall mean Kilogram

“No.” shall mean Number“

Prs” shall mean Pairs

“B.S.” shall mean the current British Standard Specification published by the British Standards institution, 2 Park Street, London, W.1. England

“As before” shall mean in all respects as earlier described in the same or previous bill

“Ditto” shall mean the whole of the preceding description except as qualified in the description. Where it occurs in descriptions of succeeding terms it shall mean the whole of the preceding description which is contained within the appropriate brackets.

“Fix Only” shall mean take delivery on site (unless otherwise stated), unload where necessary, transport within site compound, store, unpack, check contents against orders and packing lists, assemble as necessary, distribute to position, hoist and fix only.

3. TENDER CONDITIONS

Any act of collusion that may distort normal competitive conditions may cause the rejection of the tenders concerned. By participating in the tendering, tenderers certify not to be involved in such acts of collusion.

Tenders containing abnormally high or low unit prices and /or lump sums may be rejected. Before such rejection, however the sub-contractor may be given the opportunity of giving a detailed explanation.

Tenders must be returned complete and tenderers, or their assigned representatives are at liberty to witness the tender opening at the time and venue stated in the letter of invitation to tender. Tenders received after the stated time will be returned unopened and incomplete tenders will be rejected.

Tenders are invited in strict accordance with the documents issued, counter offers submitted with tenders will not be considered, letters of qualifications with tenders may be ignored if they have the effect of modifying either the terms of a tender or the compatibility of a tender with the other tenders. However should a tenderer. In good faith wish to propose modifications to the tender terms, conditions and contents for the purposes of reducing the tender amount then he shall contact the Engineer in writing well before the date of tender opening. Should the Engineer approve the proposed modification, all tenderers will be advised in due time for the modification of their tenders. No proposed modification will be considered unless this procedure has been followed.

The client is not bound to accept the lowest or any tender, nor is the client bound to divulge reasons for the acceptance or non-acceptance of any tender. Any tender may be accepted by the client within the stated period unless previously withdrawn by the tenderer.

All deletions, additions and corrections to figures inserted in the tender document are to be counter signed by the tenderer.

In the event of two or more tenders being in the same sum, tenderers may be given 7 days within which to revise their tender prices. Should there again be two or more tenders in the same sum, and in the absence of any qualities to give one tenderer preference over the other(s), then the sub-contract may be awarded by drawing lots in the presence of the tenderers concerned.

4. DESCRIPTION OF SITE

The site of the works is within **Nairobi**. Due care will be required during construction so that the occupants and facilities in the adjacent premises and the premises themselves are not interfered with in any way.

The sub-contractor is recommended to visit the site and will be deemed to have satisfied himself with regard to the relevant details of preliminary. If the sub-contractor, for whatever reason, feels specialised attendance will be required, with significant financial implications or requires specialised mobilisation to start the works, he should spread the cost of such works in his unit rates.

No claims whatsoever by the sub-contractor for additional payment will be allowed on the grounds of any misunderstanding or misapprehension in respect of any such matters or otherwise, should the sub-contractor be required to offer specialised attendance prior to, or during, the performance of the contract.

5. TENDER EVALUATION PROCEDURES

Following the return of the tenders for the works measured in these bills of quantities, arithmetical and other analysis will be carried out in order to select the lowest acceptable tender in terms of responsive and realistic pricing, etc. This section will be at the sole discretion of the Employer.

The unit rates offered by the selected tenderer will then be applied to new quantities measured by the Engineer for the revised scope of works.

The resultant total, together with the priced preliminaries and any modified prime cost and provisional sums will be consolidated into a sum for which the sub-contract will be signed. This procedure will be applied only to the selected tender. Neither the Client nor the Consultants will enter into discussion or any correspondence with the other tenderers after the selection process has been carried out and no reasons will be given for selection or non-selection.

Any tenderer unable to comply with these procedures will be disqualified from the selection process

6. ACCESS TO SITE AND SECURITY

Means of access to the site will be as directed by the Architect; no other access will be permitted in any circumstances.

7. AREA TO BE OCCUPIED BY THE SUB-CONTRACTOR

Areas to be occupied by the sub-contractor for use as storage shall be as directed by the Project Architect.

8. DRAWINGS

8.1 The sub-contractor will be deemed to have examined the drawings before tendering and to have satisfied himself regarding their details and regarding the nature and extent of the works and the method of installation involved. No claims arising out of misapprehension in these respects will be allowed.

8.2 The sub-contractor shall at his own risk and costs execute and perform the works described in the conditions of contract and bills of quantities and detailed in the drawings provided and supplied to the sub-contractor for the purpose of works and completely finish the said works in a good workmanship and with the utmost expedition.

8.3 The sub-contractor shall satisfy himself as to the correctness of all drawings and measurements. If the sub-contractor finds any discrepancy in the drawing or between the drawing and the specifications he shall immediately refer the same to the Engineer who will decide which shall be followed.

Figured dimensions shall be taken in preference to the scale mentioned on or attached to any drawing. Details shown on drawings shall be taken in preference to items and quantities in the specification.

8.4 Two copies of all drawings and of the specifications will be furnished free of cost to the sub-contractor (whose tender has been accepted) for his own use. Any extra copies will be paid for.

9. VALUATIONS OF LUMP SUMS AND PRELIMINARY COSTS

Lump sums entered in these bills of quantities against any item of general condition or preliminaries will be included in appropriate valuations according to reasonable assessment of actual costs involved in the item.

10. PAYMENT FOR MATERIALS ON SITE

All materials for incorporation in the works must be properly installed before payment is effected unless specifically exempted by the Engineer/Architect. This is to include the materials of the sub-contractor, and his nominated suppliers.

11. CONTRACT AGREEMENT AND CONDITIONS

11.1 General

The articles of Agreement and conditions shall be the agreement and schedule of conditions of building contract forms published by the Kenya Association of Building and Civil Engineering Contractors' (KABCEC).

11.2 Water and Electricity Supply

The main contractor will make water and electrical power available to the **CCTV & access control** sub-contractor. The main contractor and the sub-contractor will mutually agree whether or not the latter should pay for the water /electricity used for the works. That notwithstanding, no excuse will be entertained for power failure or lack of water as the sub-contractor is required to make his own arrangements in such circumstances.

11.3 Sub-contractor's Materials

Purchase of materials by the sub-contractor and their storage on site for inclusion in payment certificates far in advance of reasonable requirements may be allowed at the sole discretion of the Engineer. This however is also subject to availability of such storage space. Storage space may be provided on site.

12. WARRANTY AND PERFORMANCE STANDARDS

The sub-contractor must furnish the client through the Engineer with a general written warranty covering quality of workmanship, material and equipment and be compelled thereby for a one year period after practical completion of the sub-contract.

The sub-contractor must make good, at his own expense, such repairs and replacements as may be required as a consequence of negligent workmanship or defective materials. The sub-contractor must also procure such warranties and guarantees as aforesaid from all manufacturers and/or suppliers of materials or equipment incorporated in the project under this contract.

The sub-contractor must comply in all respects with given standards of workmanship as defined and described in the specifications and Bills of Quantities and relevant codes of Practice. The sub-contractor must also comply with all tests of materials as required and/or directed by the Engineer.

13. TOOLS, PLANTS, ETC

The sub-contractor shall allow for providing of all ladders, tools, plant and transport required for the works, except in so far as may be specifically stated otherwise.

14. SAFETY, HEALTH AND WELFARE OF WORKPEOPLE

The sub-contractor shall allow for providing for the safety, health and welfare of workpeople and for complying with any relevant ordinances, Regulations or Union agreement.

15. NATIONAL INSURANCE AND PENSIONS

The Sub-contractor shall allow for making any National Social Security Fund payments due in respect of workpeople.

16. HOLIDAY AND TRANSPORT OF WORKPEOPLE

The sub-contractor shall allow for providing holidays and transport for workpeople and for complying with any relevant ordinances or union agreement.

17. TRAINING LEVY

The sub-contractor's attention is drawn to legal notice no. 237 of October, 1971, which requires payments by the sub-contractor of a training levy on all contracts of more than Shs. 50,000/= in value and his tender must include for all costs arising or resulting there from. Proof of payment of those training levies will be required.

18. EXISTING PROPERTY

The sub-contractor shall take every precaution to avoid damage to all existing property including flower beds, fences, roads, cables, office equipment, drains, adjacent buildings and other services and he will be held responsible for all damages arising from the execution of this sub-contract to the afore-mentioned property and he shall make good all such damage where directed at his own expenses to the satisfaction of the Engineer.

19. TESTING

The sub-contractor shall allow for all testing of material and installations required by these specifications and he shall be responsible for all expenses incurred in completing such tests, including costs of materials and labour, equipment, transport and all other costs.

20. SUPERVISION AND WORKING HOURS

The works shall be executed under the direction, and to the entire satisfaction in all respects, of the Engineer who shall at all times during normal working hours have access to the works and to the yards and workshops of the sub-contractor or other places where work is being prepared for the sub-contractor.

The working hours shall be those generally worked by good employers in the building and civil engineering trades taking note of gazetted holidays unless the Engineer shall so direct.

No work shall be covered up in the absence of the clerk of works without the prior approval of the Engineer in writing.

21. SAMPLES

The Sub-contractor shall furnish at his own cost any samples of materials or workmanship that may be called for by the Engineer for his approval or rejection and any further samples in the case of rejection until such are approved by the Engineer, and the Engineer may reject any materials or workmanship not in his opinion up to the approved samples.

The Engineer shall instruct for the testing of such materials as he may at his discretion deem desirable and the testing shall be made at the sub-contractor's cost. The sub-contractor shall allow in his tender for such samples and tests.

22. MATERIALS, TOOLS, PLANT ETC.

All materials and workmanship used in the execution of works shall be of the best quality and description unless otherwise described. Any materials for the works condemned by the Engineer shall immediately be removed from the site at the sub-contractor's expense.

The sub-contractor shall provide at his own risk and cost all materials, scaffolding, tools, plant, transport and workmen required for the works except, insofar as may be stated otherwise herein.

The sub-contractor shall order all materials to be obtained from overseas immediately after the sub-contract is signed and shall also order materials to be obtained from local sources as early as necessary to ensure that such materials are onsite when required for use in the works.

Any defects which may appear, either of materials or of workmanship, during the defects liability period provided by the sub-contract, shall be made good by the sub-contractor at his own expense, as and when directed.

If the sub-contractor shall fail to carry out such orders, as by the preceding paragraph provided within such reasonable time as may be specified in the order, the materials or works affected may be made good by others in such manner as the Engineer may direct, in which case the cost thereby incurred shall, upon the written certificate of the Engineer, be recovered from the sub-contractor as liquidated damages.

23. FOREMAN

The sub-contractor shall keep constantly on works a competent English-speaking foreman and any directions or explanations given by the Engineer to such a foreman shall be deemed to have been given to the sub-contractor.

24. INSURANCE

The sub-contractor shall during the execution of the works, insure himself and keep himself insured against all liability under the workmen's compensation act or any amendment thereto for accidents to workmen employed by him on the said works and shall hold the employer and all parties to the contract harmless in respect of any such liability.

The sub-contractor shall further insure himself and keep himself insured against all liabilities arising from all Third party claims arising from accidents and he shall hold the Employer, the Consultants and all parties to the contract harmless in respect of any such liabilities.

No payments on account of the work executed will be made to the sub-contractor until he has satisfied the Engineer either by the production of an Insurance Certificate that the foregoing provisions have been complied with in all respects.

Thereafter the Engineer may from time to time check that premiums are duly paid up by the sub-contractor who shall, if called upon to do so, produce receipts of premium renewals for the Engineer's inspection.

25. BOND

The sub-contractor shall find and submit for the approval by the Engineer one surety who shall be an established bank, Insurance company or fidelity guarantee corporation and who will be willing to be bound to the Employer in an amount equal to ten percent (10%) of the sub-contract amount for the due performance of the sub-contractor up to the date of completion as certified by the architect and who will then and if called upon, sign a bond to that effect, on the same day as the sub-contract agreement is signed. In the event of the surety named not being approved by the Engineer, the sub-contractor shall furnish within seven days another surety to the approval of the Engineer. This shall be complied with unless the **MAIN WORKS** deems the subcontract as **DOMESTIC** contract.

26. TIME FOR COMPLETION AND LIQUIDATED DAMAGES

The sub-contractor shall proceed with the works in such manner and in such order, as the Engineer shall direct so as to complete the works on the shortest possible time.

It is the responsibility of the sub-contractor to ensure that all material, fittings, equipment and items to be supplied are ordered and delivered to the site ready for installation at such times as to cause no hold up to the programme of work.

NOTE: 1. The sub-contract completion period is the same as that of main contract.

2. Liquidated damages and Ascertained damages will be calculated pro-rata on the rate provided in the main contract.

27. PAYMENT AND CERTIFICATES

Payments shall be made through certificates via the main contractor. All payments shall be less retention as specified in the sub-contract agreement. The sub-contractor shall be paid only for work done and /or materials on site.

The percentage of certified value retained should be 10%. Limit of Retention shall be a sum equivalent to 5% of the sub-contract sum.

Prices quoted shall include 16% VAT and 3% withholding tax and all taxes applicable at the time of tender.

No certificate so issued by the Engineer/Architect shall in itself be considered conclusive evidence as to the sufficiency of any work or materials to which the terms and conditions of this agreement or from his liability to make good all defects as provided thereby.

28. CONDITIONS OF SUB-CONTRACT, ETC

The sub-contract agreement shall be based on KABCEC conditions. FIDIC conditions for electrical and mechanical works shall form complementary reference where clear interpretation cannot be made.

29. BLASTING

Blasting will not be allowed unless with express authority of the Engineer.

30. HOISTING

The sub-contractor is referred to the Drawings and to the general description of the building. Throughout these specifications generally no mention is made of heights for hoisting.

All prices must include for hoisting and fixing at any level within the limits shown on the drawings or included in the general description of works. Where a particular level is specified the sub-contractor shall price accordingly.

31. CASING UP AND PROTECTING

The sub-contractor shall be responsible for casing up or otherwise protecting to the satisfaction of the Engineer all parts of the sub-contract works liable to cause injury and for removing such protection and making good on completion.

32. WORKS TO BE DELIVERED UP CLEAN

On completion of the works, the site and the works shall be cleared of all plant, scaffolding, rubbish and unused materials and shall be delivered up in a clean and perfect condition in every respect to the satisfaction of the Engineer.

33. DEFECTS LIABILITY PERIOD

The defects liability period shall be as provided in the main contract.

34. CLAIMS FOR EXTRAS

This is a fixed price contract and no claims whatsoever on extras will be entertained.

35. TRADE NAMES

Where trade names of manufacturer's catalogue numbers are mentioned in these specifications the reference is intended, as a guide to the type of the article or material required. The sub-contractor may use any article or material equal in type or quality to those therein described subject to the prior approval of the Engineer, and at his (Engineer's) absolute discretion. The onus of proof as to equivalent quality will rest with the sub-contractor, whose tender will be deemed to include for the makes described hereafter.

36. FLUCTUATIONS

This is a fixed price sub-contract and claims shall not be allowed on fluctuations.

TENDER EVALUATION CRITERIA

After tender opening, the tenders will be evaluated in 3 stages, namely:

1. Preliminary evaluation
2. Technical Evaluation; and
3. Financial Evaluation.

STAGE 1: PRELIMINARY EXAMINATION

This stage of evaluation shall involve examination of the mandatory requirements as set out in the Tender Advertisement Notice or Letter of Invitation to tender and any other conditions as stated in the bid document.

These conditions include the following:

- i. Current **Category of Registration** and **Valid Practising Licenses** with National Construction Authority (NCA) for the category as listed below.
 “NCA 4” and above in the **Electrical Class of works**
- ii. Fully filled technical schedule for Compliance with Technical Specifications
- iii. Proof of payment for tender document if required;
- iv. The Bid has been submitted in the format required by the procuring entity for the bidder (and all joint venture bids);
- v. Provision of a tender Security that is in the required form, amount and that the tender security is valid for the period required; (1% of the quoted sum)
- vi. Fully filled Form of Tender for the bidder (and all joint venture bids contractors);
- vii. Valid Tax Compliance Certificate for the bidder (and all joint venture bids contractors);
- viii. Fully filled Confidential Business Questionnaire (and all joint venture bids contractors);
- ix. Fully signed Statement of Compliance (and all joint venture bids contractors);
- x. One Number Bid Document for the bidder (and for joint venture one number bid having all the sub bids);
- xi. Signed Pre-tender site visit form if pre-tender site visit is required;
- xii. Proof of authorization shall be furnished in form of a written power of attorney which shall accompany the tender if the signatory to the tender is not a director of the company (provide name and attach proof of citizenship of the signatory to the tender). Provide also Form CR12 from the Registrar of Companies.
- xiii. A copy of valid business permit for the bidder (and all joint venture bids);

- xiv. A copy certificate of registration/Incorporation for the bidder (and all joint venture bids);
- xv. A copy pin certificate for the bidder (and all joint venture bids);
- xvi. A copy of company's list of directors, beneficial owners, name if proprietor or names of partners (copy of CR 12) for the bidder (and all joint venture bids);
- xvii. Signed and signed statement of verification that no debarment in matters of public procurement proceedings for the bidder (and all joint venture bids);
- xviii. Declaration that the firm has not been convicted of corrupt or fraudulent practices and will not engage in any corrupt or fraudulent practices for the bidder (and all joint venture bids);

STAGE 2: TECHNICAL EVALUATION

The tender document shall be examined based on clause 2.2 of the Instruction to Tenderers which states as follows:

‘The tenderers will be required to provide evidence for eligibility of the award of the tender by satisfying the employer of their eligibility under Instruction to Tenderers and their capability and adequacy of resources to effectively carry out the subject contract. In order to comply with provisions of Instruction to Tenderers, the tenderers shall be required;

- a) To fill the Standard Forms provided in the bid document for the purposes of providing the required information. The tenderers may also attach the required information if they so desire;*

PARAMETER	MAXIMUM POINTS
(i) Compliance with Technical Specifications-----	40
(ii) Key personnel -----	20
(iii) Contract Completed in the last Four (4) years -----	18
(iv) Audited Financial Report for the last 3 years -----	10
(v) Evidence of Financial Resources -----	12
TOTAL	100

The pass-mark under the Technical Evaluation is 70 percent. Any bidder who scores below the pass mark will be considered non responsive

STAGE 2 - TECHNICAL EVALUATION

Item	Description	Point Scored	Max. Point
	<p>Director of the firm Holder of degree in Architectural, Quantity surveying or Engineering field (attach degree certificate) -----5</p> <p>Holder of diploma in any of the above fields (attach diploma certificate)----- 4</p> <p>Holder of certificate in in any of the above fields (attach craft certificate) ----- 3</p> <p>No relevant certificate-----0</p>		5
	<p>Project supervisor Holder of degree in Electrical Engineering field (attach degree certificate) -----5</p> <p>Holder of diploma in Electrical engineering field (attach diploma certificate)----- 4</p> <p>Holder of certificate in Electrical engineering field (attach craft certificate) ----- 3</p> <p>No relevant certificate-----0</p>		5

	<p>Project skilled staff(2no.officers)</p> <p>Holder of degree in Electrical Engineering field (attach degree certificate) ----- 2 each</p> <p>Holder of diploma in Electrical engineering field (attach diploma certificate) ----- 3 each</p> <p>Holder of certificate in Electrical engineering field (attach craft certificate) ----- 5 each</p> <p>No relevant certificate-----0</p>		<p>10</p>
	<p>A Minimum of three (3) projects of similar nature, complexity and magnitude completed within the last five (5) years from the date of tender opening (Attach signed project completion certificates)</p> <p>projects of a value more than 70% and above of contract price quoted for this project @ 6 marks each</p> <p>projects of a value of a value between 50% - 69% of contract price quoted for this project @ 5 marks each</p> <p>projects of a value of a value between 20% - 49% of contract price quoted for this project @ 2 marks each</p> <p>projects of a value of a value between 1% - 19% of contract price quoted for this project @ 1 marks each</p> <p>no projects @ 0 marks</p>		<p>18</p>

	<p>Audited financial report Attach Audited financial report for the last two (2) years (2019 and 2020) or (2020 and 2021) whichever is the latest. The Audited Financial Reports are valid only when be signed and stamped by a registered Accountant or Audit Firm registered and recognized in Kenya. indicate the current ratio for each year</p> <p>Has current ratio over 2 @ 5 marks for each year</p> <p>Has current ratio of between 2 and 1.5 @ 4 marks for each year</p> <p>Has current ratio of between 1.5 and 1 @ 3 marks for each year</p> <p>Has current ratio of between 1 and 0.7 @ 2 marks for each year</p> <p>Has current ratio of less than 0.7 @ 1 marks</p> <p>Has not indicated current ratio @ 0 marks</p>		10
	<p>Financial Resources Attach record of cash in hand in form of certified bank statement or Current letter (dated 2021 or 2022) from the bidders' bankers and level of overdraft or credit limits allowed.</p> <p>Has financial resources of a value of 100% and above of contract price quoted for this project @ 12 marks</p> <p>Has financial resources of a value of a value between 99% - 90% of contract price quoted for this project @ 5 marks each</p>		12

	<p>Has financial resources of a value less than 90% of contract price quoted for this project @ 2 marks</p> <p>Has no financial resources @ 0 marks</p>		
	<p>Compliance with technical specifications</p> <ul style="list-style-type: none"> <input type="checkbox"/> Has submitted relevant technical brochure/catalogues <input type="checkbox"/> Has highlighted the Catalogue Number if many options for the same item are on the attached catalogue <input type="checkbox"/> Fulfill the tender specifications in terms of Standards of manufacture; Performance ratings/characteristics; <p>a) Has fully complied with the technical specifications @ 40 marks</p> <p>b) Has not complied with the technical specifications @ 0 marks</p>		<p>40</p>

Current ratio = current assets/current liabilities

Any bidder who scores 70 points and above in this Technical Evaluation shall be considered for further evaluation

STAGE 3 - FINANCIAL EVALUATION

Upon completion of the technical evaluation a detailed financial evaluation for the bidder (and all their joint venture partners) shall follow.

The evaluation shall be in three stages

- a) Determination of Arithmetic Errors for the bidder (and all their joint venture partners);
- b) Comparison of Rates for the bidder (and all their joint venture partners);
; and
- c) Consistency of the Rates for the bidder (and all their joint venture partners);

A) Determination of the Arithmetic Errors

Arithmetic Errors will be corrected by the Procuring Entity as follows:

- i) In the event of a discrepancy between the amount as stated in the form of Tender and the corrected tender figure in the Main summary of the Bills of Quantities, the amount as stated in the Form of tender shall prevail. Pursuant to Section 82 of the Public Procurement and Asset Disposal Act 2015, the tender sum as submitted and read out during the tender opening shall be absolute and final and shall not be the subject of correction, adjustment or amendment in any way by any person or entity;
- ii) Error correction factor shall be computed by expressing the difference between the amount and the corrected tender sum as a percentage of the corrected contract works
- iii) The Error correction factor shall be applied to all contract works (as a rebate or addition as the case may be) for the purposes of valuations for Interim Certificates and valuations of variations.

B) Comparison of rates for the bidder (and all their joint venture partners)-

Items that are underpriced or overpriced may indicate potential for non-delivery and front loading respectively. The committee shall promptly write to the tenderer asking for detailed breakdown of costs for any of the quoted items, relationship between those prices, proposed construction/installation methods and schedules.

The evaluation committee shall evaluate the responses and make an appropriate recommendation to the procuring entity's tender committee giving necessary evidence. Such recommendations may include but not limited to:

- a) Recommend no adverse action to the tenderer after a convincing response;
 - b) Employer requiring that the amount of the performance bond be raised at the expense of the successful tenderer to a level sufficient to protect the employer against potential financial losses;
 - c) Recommend non-award based on the response provided and the available demonstrable evidence that the scope, quality, completion timing, administration of works to be undertaken by the tenderer, would adversely be affected or the rights of the employer or the tenderers obligations would be limited in a substantial way.
- C) Consistency of the Rates

The evaluation committee will compare the consistency of rates for similar items and note all inconsistencies of the rates for similar items.

STAGE 4 - RECOMMENDATION FOR AWARD

SECTION NAME:

PART B: GENERAL, PARTICULAR & TECHNICAL SPECIFICATIONS FOR CCTV & ACCESS CONTROL

GENERAL SPECIFICATIONS OF MATERIALS AND WORKS

- 2.1 General
- 2.2 Standard of Materials
- 2.3 Workmanship
- 2.4 Procurement of Materials
- 2.5 Shop Drawings
- 2.6 Record Drawings
- 2.7 Regulations and Standards
- 2.8 Setting out Works
- 2.9 Testing on Site

2.1 GENERAL

This specification is to be read in conjunction with any other information herein issued with it. Bills of quantities and schedule of unit rates shall be the basis of all additions and omissions during the progress of the works.

2.2 STANDARD OF MATERIALS

Where the material and equipment are specifically described and named in the Specification followed by approved equal, they are so named or described for the purpose of establishing a standard to which the contractor shall adhere.

Should the contractor install any material not specified herein before receiving approval from the proper authorities, the Engineer shall direct the contractor to remove the material in question immediately. The fact that this material has been installed shall have no bearing or influence on the decision by the Engineer.

All materials condemned by the Engineer as not approved for use, are to be removed from the premises and suitable materials delivered and installed in their place at the expense of the Contractor. All materials required for the works shall be from branded manufacturers, and shall be new and the best of the respective kind and shall be of a uniform pattern.

2.3 WORKMANSHIP

The workmanship and method of installation shall conform to the best standard practice. All work shall be performed by a skilled tradesman and to the satisfaction of the Engineer. Helpers shall have qualified supervision.

Any work that does not in the opinion of the Engineer conform to the best standard practice will be removed and reinstated at the contractor's expense.

Permits, Certificates or Licenses must be held by all tradesmen for the type of work; in which they are involved where such permits, certificates or licences exist under Government legislation.

2.4 PROCUREMENT OF MATERIALS

The contractor is advised that no assistance can be given in the procurement or allotment of any materials or products to be used in and necessary for the construction and completion of the work.

Contractors are warned that they must make their own arrangements for the supply of materials and/or products specified or required. Where necessary, advance payment shall be granted as stipulated in the Appendix to Instruction to Tenderers clause 9 page A/17

2.5 RECORD DRAWINGS

These diagrams and drawings shall show the completed installation including sizes, runs and arrangements of the installation. The drawings shall be to scale not less than 1:50 and shall include plan views and section.

The drawings shall include all the details which may be useful in the operation, maintenance or subsequent modifications or extensions to the installation.

Three sets of diagrams and drawings shall be provided, all to the approval of the Engineer.

One coloured set of line diagrams relating to operating and maintenance instructions shall be framed and, mounted in a suitable location.

2.6 REGULATIONS AND STANDARDS

All work executed by the contractor shall comply with the current edition of the "Regulations" for the Electrical Equipment of Buildings, issued by the Institution of Electrical Engineers, Electric Power Act, Kenya Bureau of Standards (KBS), Institution of Electrical Engineers (I.E.E) Wiring Regulations, Current recommendation of CCITT and CCIR, and with the Regulations of the Local Electricity Authority and the Communications Commission of Kenya (CAK)

Where the sets of regulations appear to conflict, they shall be clarified with the Engineer.

2.7 SETTING OUT WORK

The contractor, at his own expenses, is to set out works and take all measurements and dimensions required for the erection of his materials on site; making any modifications in details as may be found necessary during the progress of the works, submitting any such modifications or alterations in detail to the Engineer before proceeding and must allow in his tender for all such modifications and for the provision of any such sketches or drawings related thereto.

2.8 TESTING ON SITE

The contractor shall conduct during and at the completion of the installation and, if required, again at the expiration of the maintenance period, tests in accordance with the relevant section of the current edition of the Regulations for the electrical equipment of buildings issued by the I.E.E of Great Britain, the Government Electrical Specifications No. 1 and No.2, Electric Supply Company's By-Laws, Communications Authority of Kenya (CA) requirements or any other supplementary Regulations as may be produced by the engineer.

Any faults, defects or omissions or faulty workmanship, incorrectly positioned or installed parts of the installation shall be rectified by the contractor at his own expense.

**PARTICULAR AND TECHNICAL SPECIFICATIONS OF MATERIALS AND WORKS FOR
IP-CCTV SURVEILLANCE AND ACCESS CONTROL SYSTEMS INSTALLATION WORKS**

CLAUSE	DESCRIPTION
PART 1	
1.00	Particular specifications
1.01	Description of the Site
1.02	Description of the Project
PART 2	
2.00	Technical Specifications for the IP-CCTV Cameras System
2.01	Extent of Works for Security Surveillance System
2.02	Working Drawings
2.03	Minimum Allowable Technical Specifications for the IP-CCTV Cameras System
2.04	Minimum Requirements for Proposed IP-CCTV Cameras System
2.05	Mounting Brackets
2.06	Camera Housing
2.07	Color Video Monitors
2.08	Color Digital Network Video Multiplexing Recorder
2.09	CCTV Management Software
2.10	Uninterruptible Power Supply (UPS)
2.11	Cables and Connectors
2.12	Patch Panels
2.13	Network Control Equipment at the Network Core
2.14	Labelling
2.15	Network Cabinet
2.16	Ethernet Floor EDGE Switches
2.17	Optical Fibre Cable
2.18	Fibre Patch Panels
2.19	Backbone
2.20	Network Management System
2.21	Brochures and Technical Literature
PART 3	
3.00	Technical Specifications for the Access Control System Works
3.01	Extent of Works for Access Control System Installation Works
3.02	The IP Based Intelligent System Controller
3.03	Biometric (Finger) and Proximity Card Reader
3.04	Proximity Card
3.05	Magnetic Door Contacts
3.06	Door Access Controller
3.07	Magnet strip Card
3.08	Door Contacts
3.10	Uninterruptible Power Supply (UPS)
3.13	Access Control Server Controller
3.14	Biometric Clocking Machine
3.15	Under Vehicle Surveillance System
3.15	Brochures and Technical Literature
PART 4	
4.00	Technical Specifications for Computers and Accessories
4.01	Specifications for Desktop Computer
4.02	Specifications for Laptop Computer
4.03	Specifications for Medium Duty Laser Printer
4.04	Specifications for Light Duty UPS

PART 1**1.00 PARTICULAR SPECIFICATIONS – IP-CCTV AND ACCESS CONTROL SYSTEMS INSTALLATION WORKS****1.01 DESCRIPTION OF THE SITE**

The site of the proposed works is located at **Nairobi West, Nairobi County.**

1.02 DESCRIPTION OF THE PROJECT

The works comprise the Supply, Installation, Testing and Commissioning and leaving in servicing condition the IP Based Closed Circuit Television Cameras and Access Control Systems in the Proposed Buffalo Towers for Nyati Sacco Limited in Nairobi West, Nairobi County as herein described in the specifications. The works shall include but not limited to the Supply and Installation of the following;

- IP Cameras
- Network Video Recorders
- LED Monitors
- Access Control System
- Cabling of the CCTV & Access Control Systems and all Associated Works

PART 2

2.00 TECHNICAL SPECIFICATIONS FOR THE IP-CCTV CAMERAS SYSTEM

2.01 EXTENT OF WORKS FOR SECURITY SURVEILLANCE SYSTEM

The security surveillance system should consider the following.

IP CCTV Camera. The cameras specified should be able to cover the distance with clear pictures. Consider whether there shall be need to support the fixed digital cameras with the Pan, Tilt and Zoom Cameras or not. Highly sensitive areas should be covered with more cameras able to take pictures of any person coming in both from the front and the rear. The resolution of the cameras should be able to give motion pictures that are clear.

LED Monitors. The color monitors must be of high resolution and preferably of plasma screen. The size of the monitor should be big enough to allow the operators make correct deductions both in real time operation and during playbacks.

IP Network Video Recording. The recording multiplexer resolution has to be equally high for the monitor to display with a high resolution.

The IP CCTV Surveillance system should be able to support the following;

- IP based recording system with motion detection.
- Digital zooming into recorded images/ live view
- Multi-level password protection and logging facilities
- Integrates with access control, burglar control, burglar alarms and Fire alarm system and other building management systems as may be specified by the engineer.
- Image compression for remote web live and playback viewing in case of IP.
- Multi display monitors
- Automatic daily archiving to hard drive or optical drive.
- Fully adjustable digital video motion detection with exclusion /inclusion multi regions per camera.
- Efficient video collection, storage and retrieval.
- Advanced and instant search capability
- Digitally signed recordings, with audit trails of all operator actions and system event.
- Storage capacity of the Network Video Recorder. Space to provide at least three months continuous recording and back up for automatic archiving for one year and redundancy
- Infra-red illuminators in poor lighting conditions
- Able to interface with other systems on the ground
- Support IP and PoE connectivity.

2.02 WORKING DRAWINGS

The Contractor shall submit to the Project Manager working drawings for the proposed system for approval. The drawings will show the locations for all cameras, cable routing and terminations, telecommunication outlets/connectors, location of NVR, monitors, core switch and Edge switches.

2.03 MINIMUM ALLOWABLE TECHNICAL SPECIFICATIONS FOR THE CCTV SYSTEM

2.03.1 GENERAL SPECIFICATIONS FOR THE CAMERAS

The cameras are classified into two main types

a) Fixed cameras –

These cameras have a fixed area of view depending on its angle of view and the focal length of the lens used.

They can be used in indoor and outdoor depending on the requirements. When used out door, the cameras are housed in a weather proof housing of IP66. Those used indoor come with different shapes of housings. The exview housings are used for cameras covering long distances like corridors and the dome housings are used for common areas like lobbies, security desks etc.

b) Pan Tilt and Zoom Cameras

These cameras are only used to support the static cameras. They are useful as they are able to pan 360 degrees, tilt over 90 degrees and zoom into an object for Min 16 times and above.

The cameras shall be indoor type and outdoor type with PoE/ 240V main supply with the appropriate power adaptors, 50Hz field frequency and operating according to the CCIR standard with minimum resolution of 2megapixels.

The camera shall be fixed on sliding rail track on the ceiling slab or walls as directed by the Electrical Engineer with an appropriate bracket.

It shall be possible to control the lens and the pan only head remotely via a remote control box at the control room. The Camera must be able to be controlled by a CCTV keyboard

They shall be linked to the Television Monitors and the Control Equipment through CAT 6 A cables as appropriate and according to the project Engineers instructions.

The mounting height and position of cameras shall be such that the desired coverage shall be achieved as distinctly as possible.

The digital signal processing (DSP) camera shall be aesthetically styled. The DSP chip will enable advanced video processing and manipulation to be carried out in the camera head.

2.04 MINIMUM REQUIREMENTS FOR THE PROPOSED CCTV SYSTEM

The cameras shall have the following minimum specifications but cameras with higher specifications shall be accepted:

a) IP Bullet camera

- 3 Mega Pixel Full HD Outdoor IP Bullet Camera with Infrared
- Built in Infrared 25 meters minimum
- imaging sensor – 1/2.8” minimum
- Wide Dynamic Range – 120dB
- Motorized Varifocal Auto Iris lens
- Day and night vision; Minimum illumination 0.08lux (colour), 0lux (B/W) IR on
- Focal Length – 3~8mm
- IP network capable
- PoE capability
- H.265 video compression
- Accessible edge storage with 64GB internal MicroSD card slot
- True day and night vision capability
- Tampering detection, Face detection, Audio Detection, Motion detection and event triggered alarm processing.
- Masking Capability,
- Vandal proof IK-10 rating housing
- Weather proof IP66 rating
- ONVIF Compliant

(State make and type, and enclose catalogues)

b) IP Dome CCTV Camera

- 3 Mega Pixel Full HD IP Dome Camera with Infrared
- Built in Infrared 20 meters minimum
- imaging sensor – 1/2.8” minimum
- Wide Dynamic Range – 120dB
- Motorized Varifocal Auto Iris lens
- Day and night vision; Minimum illumination 0.1lux (colour), 0lux (B/W) IR on
- Focal Length – 3~8mm
- IP network capable
- PoE capability
- H.265 video compression
- Accessible edge storage with 64GB internal MicroSD card slot
- True day and night vision capability
- Tampering detection, Face detection, Audio Detection, Motion detection and event triggered alarm processing
- Masking Capability,
- Vandal proof IK-10 rating housing
- Weather proof IP66 rating
- ONVIF Compliant

(State make and type, and enclose catalogues)

c) Mini Dome/Fisheye CCTV Camera

- 3 Mega Pixel Full HD IP
- imaging sensor – 1/2” minimum
- Wide Dynamic Range – 120dB
- angular field of view of at least H:180°; V:180°; D:180°
- Day and night vision; Minimum illumination 0.5lux (colour), 0lux (B/W) IR on
- IP network capable
- PoE capability
- H.265 video compression
- Accessible edge storage with 64GB internal MicroSD card slot

- True day and night vision capability
- Tampering detection, Audio Detection, Motion detection and event triggered alarm processing
- Masking Capability,
- Vandal proof IK-10 rating housing
- Weather proof IP66 rating
- ONVIF Compliant

(State make and type, and enclose catalogues)

d) IP Box CCTV Camera

- 2 Mega Pixel Full HD IP box Camera
- imaging sensor – 1/2.8” minimum
- Wide Dynamic Range – 120dB
- Auto Iris lens
- Day and night vision; Minimum illumination 0.1lux (colour), 0lux (B/W) IR on
- Focal Length – 3~8mm
- IP network capable
- PoE capability
- H.265 video compression
- Accessible edge storage with 64GB internal MicroSD card slot
- True day and night vision capability
- Tampering detection, Face detection, Audio Detection, Motion detection and event triggered alarm processing
- Masking Capability,
- Vandal proof IK-10 rating housing
- Weather proof IP66 rating
- ONVIF Compliant

(State make and type, and enclose catalogues)

e) IP PTZ CCTV Camera

- 2 Mega Pixel Full HD IP Dome Camera with Infrared
- Built in Infrared 100 meters minimum
- imaging sensor – 1/2.8” minimum
- Wide Dynamic Range – 120dB
- Varifocal Auto Iris lens
- Minimum Adjustable digital zoom 16x, optical zoom 32x
- Day and night vision; Minimum illumination 0.1lux (colour), 0lux (B/W) IR on
- Focal Length – 4.5~130mm
- IP network capable
- PoE capability
- H.265 video compression
- Accessible edge storage with 64GB internal MicroSD card slot
- True day and night vision capability
- Tampering detection, Face detection, Audio Detection, Motion detection and event triggered alarm processing
- Masking Capability,
- Vandal proof IK-10 rating housing
- Weather proof IP66 rating
- Heater, Blower and Defog
- Auto tracking
- ONVIF Compliant

(State make and type, and enclose catalogues)

2.05 MOUNTING BRACKETS

The Brackets shall:

- Be suitable for wall or ceiling mounting of a single camera.
- Be at least 5.5"length
- Have an auto lock facility.

2.06 CAMERA HOUSING

The camera housing shall:

Be IP66 rated with integral cable management.

Be Weatherproof and constructed from aluminium with epoxy coating.

2.07 COLOR VIDEO MONITORS

The monitor should be capable of providing high levels of picture quality 10MHz bars visible at low brightness and reliability stable synchronization, black level clamping, low sensitivity and high stability.

The monitors shall be high performance color video monitors for monitoring scenes from the above cameras and viewing playback scenes from the video cassette recorders.

The monitors shall be located at places to be shown on site by the project manager.

The monitor shall give stable and interference free pictures of scenes being viewed. It shall also conform to the following specifications:

Type:	LED; 50,000hours panel life
System:	NTSC/PAL
Screen Size:	52"
Resolution:	1,920 x 1, 080
Display Colour:	16.0 million
Brightness:	350cd/m ²
Contrast Ratio:	5,000:1
Video input signal:	1.0 V pk-pk
Power consumption:	Not more than 80W
Power input:	240V, 50HZ
Interface:	VGA, DVI, HDMI, RGB, Audio, Video

(State make and type, and enclose catalogues)

2.08 NETWORK VIDEO RECORDER

The network video recorder shall have the following minimum requirements:

- 32 Channels
- Throughput of at least 400Mbps
- Gigabit Ethernet connection
- Multi screen Display: Full/4/9/16 way or as appropriate.
- Storage of 32TB minimum capacity
- external storage support capability
- VGA/HDMI local monitor
- Redundant hot swap power supply
- Network management/viewer software
- In built intelligent video analysis
- H.265,MPEG,MJPEG Compression
- ONVIF compatibility
- Web viewer supported
- PoE enabled
- Smart Video Search Feature for streamlined Investigations
- Recording resolution of 5MP
- IP address filtering, user access log, authentication and encryption
- Auto Launch of Video on specified Alarms/Events
- LED status indicator
- CE,UL certification

(State make and type, and enclose catalogues)

2.09 CCTV MANAGEMENT SOFTWARE

CCTV management software with the following minimum specifications: -

- Event Recording Scheme
- Operate Motion-Detector-Recording
- NTSC-PAL video recording.
- Be capable of recording real time images at full resolution and frames rate.
- Features for connection for alarm system Automatic Recycling
- Users' passwords.
- Input, Output, Audio Alert Facilities
- Remote Viewing Facilities, TCP/IP, INTERNET, ISDN, modem
- Capability of streaming into the client's existing LAN / WAN infrastructure
- Ability to quickly search through thousands of hours of recorded video information
- Event-triggered video recording to reduce storage requirements
- Masks out disturbing areas, or areas of no interest, within the specified region
- Identifies & immediately alerts user to potential security breaches
- Features should be able to be used at very low frame rates
- Easy calibration for specific applications
- Color-matching matches user-specified colour to the video image
- Functions in outside environments with changing light conditions:
- Auto-learning of background feature
- Object saliency and object Consistency mechanisms to filter out phantom objects
- "Out of Focus" condition is user-calibrated by level of focus
- Automatic self-test of camera validity
- Motion Trajectory Analyzer provides advanced analysis of the motion of objects
- Seamless integration into Enterprise security knowledge management solution.
- Analysis of stationary objects

(State make and type, and enclose catalogues)

2.10 UNINTERRUPTIBLE POWER SUPPLY (UPS)

This shall be an on-line Un-interruptible power supply with output rating able to provide power to the security surveillance system a minimum of 8 hours in case of power failure.

It shall be microprocessor- based so that both output voltage and frequency are closely regulated and continuously monitored and also provide system diagnostic and shut down protection functions. It shall feature a maintenance by-pass to enable normal routine maintenance operations to be performed without interruptions to the system.

It shall be fitted with both visual and audible alarms to indicate any change in equipment status such as:

input power problems

ups faults

ups overload

battery discharging

Other parameters are:

Input supply:	240VAC50HZ
Power factor:	0.8 lag at full load
Current limit:	125% of the normal
Output voltage:	240V AC 50 HZ
Output voltage tolerance:	2%
Output frequency tolerance:	0.05%

(State make and type, and enclose catalogues)

2.11 CABLING

- a. All cables must pass through conduits or trunking.
- b. All cables and connectors shall be labeled.
- c. No distortion due to kinks, sharp bends or excessive hauling tension shall be allowed.
- d. Cables shall be run in a manner eliminating any possibility of strain on the cable itself or on the terminations.
- e. Cables shall have no joints or splices.
- f. Cables shall be kept at a minimum distance of 150mm from items liable to become hot or cold.
- g. Bending radii shall be not less than eight times the overall cable diameter.
- h. The manufacturers hauling tension shall not be exceeded.
- i. All cable ties and fixings shall be tightened to support the cable loom without distortion of the cable sheath.
- j. The UTP 4 pair shall be of Solid copper, 24 AWG, 100 balanced twisted-pair (UTP) Category 6A cables with four individually twisted-pairs, which meet or exceed the mechanical and transmission performance specifications in ANSI/TIA/EIA-568-B.2 up to 100 MHz. Cat 6A Structured Cabling shall be used throughout the entire installation.

(State make and type, and enclose catalogues)

2.12 PATCH PANELS

- a) Shall conform to ANSI/TIA/EIA-568A and rack mounted.
- b) Shall be equipped with RJ45 contacts of Cat 6 sockets with capacity of 12, 24 or 48 ports.
- c) Shall be earthed.
- d) Except for patch cords used to connect NICs to the RJ45 sockets, all patch cords shall be labeled at each extremity with PVC support and intelligible marking. For other components the label shall be of stiff plastic PVC type.

(State make and type, and enclose catalogues)

2.13 ACTIVE NETWORK CONTROL EQUIPMENT AT THE NETWORK CORE

- The active control equipment at the core should have the following features:
- a. Backplane/switch fabric Bandwidth Capacity of 150 GBPS or more.
 - b. IEEE 802.3 compliant for power over Ethernet
 - c. IEEE 802.1 based security compliant
 - a. SNMP compliant for security
 - b. Layer 2/3/4 switch
 - c. Should support Gigabit Ethernet to the desktop
 - d. Should have at least 10-slots or higher chassis

- e. The core switches should have two links to each floor configured in active/active configuration. The links should deliver 2GBPS throughput when all ports are active.
- f. The core switch should have redundant power supply, redundant fan tray and redundant CPU/ supervisor engine installed
- g. Fiber cable linking stacks on each floor to the core should be connected to 1000Base X(GBIC) port on the core switch.
- h. Should be installed with the latest version of system software at the time of delivery.
- i. Should support Quality of service for various applications.

(State make and type, and enclose catalogues)

2.14 LABELING

- a) Horizontal and backbone cables shall be labeled at each end. The cable or its label shall be marked with its identifier.
- b) A unique identifier shall be marked on each faceplate to identify it as connecting hardware.
- c) Each port on the face plate shall be labeled with its identifier.
- d) A unique identifier shall be marked on each piece of connecting hardware to identify it as a connecting hardware.
- e) Each port on the connecting hardware shall be labeled with its identifier.
- f) A unique identifier shall be marked on each **port** on the connecting faceplate to identify it as a connecting hardware.

2.15 NETWORK CABINET

- a) The cabinet shall be metallic with front clear glass and of good finish and conveniently accessible by technical personnel for maintenance. The main cabinet shall be at least 42U and other cabinets housing edge switch should be at least 22U
- b) Power to the cabinet shall be switched off from within the cabinets. Proper power socket cables to be supplied with the cabinet.
- c) The cabinet for active devices shall conform to ANSI/TIA/EIA-568A specifications with forced cooling.
- e) Support small factor pluggable (SFP) and industry leading density up to 240 of IEEE 8033 for 1000 Base-SX ports per system.
- c) Cabinets shall have adequate room for additional components typically 3U free space.

(State make and type, and enclose catalogues)

2.16 ETHERNET FLOOR EDGE SWITCHES

Active control equipments at the LAN Edge should have the following features

- a) Active control equipments at the LAN Edge should support 10/100/1000 MBPS on all ports (RJ45) and Gigabit to the desktop connectivity
- b) The equipments should have at least two 1000BaseXGigabit uplink ports for terminating backbone Fiber.
- c) The equipments should support layer 3 routing.
- d) Should support IEEE 802.1, SSH, SNMP.
- e) Switch Fabric forwarding Bandwidth of 64GBPS or more.
- f) More than 12,000MAC addresses should be available on each switch .
- g) The switches should have 8/12/24/48 ports of 10/100/1000 MBPS.
- h) Each stack on the edge will have two links of Fiber to the core switch, totaling two fiber terminations from the core switch to the stack.
- i) Should support Jumbo frames.
- j) Total stack throughput bandwidth of 64 GBPS or more.

- k) Active Edge switches should be quoted with a minimum of **One year of warranty** covering free replacement of parts and units.
- l) The switches to be PoE plus

(State make and type, and enclose catalogues)

2.17 OPTICAL FIBRE CABLE

The fibre cable must be 8 core single mode fibre with the following specifications: -

- a) Cable size: 8 cores.
- b) Termination: SC Duplex connectors.
- c) Graded Index: Nominal 62.5/125 micron

(State make and type, and enclose catalogues)

2.18 FIBER PATCH PANELS

All Backbone Fiber links should be terminated on Fiber Patch Panels. Connector interfaces should support ST, Sc simplex, Sc duplex, FC, LC or MT-RJ.

(State make and type, and enclose catalogues)

2.19 BACK BONE

Backbone cabling inclusive of switches and all necessary accessories shall be carried out in readiness for the termination of edge switches.

The Backbone cabling shall be flexible and allow for easy 'add ons' for future expansions. Hence enough capacity shall be allowed for future expansion. It shall be done using the star topology.

2.20 NETWORK MANAGEMENT SYSTEM

Bidders must propose the manufacturers Network Management system for centralized configuration, maintenance and troubleshooting of active equipments. Third party standalone systems should not be offered as part of the solution. Features and functionalities of the system should include the following:

- a) Should be compatible with Microsoft windows/Linux operating systems
- b) Graphical User Interface for central Management and network viewing
- c) Network discovery and inventory management
- d) VLAN, multicast, security and load-balancing/fail over configuration
- e) Downloading and saving of log file from the device flash memory
- f) Centralized upgrade/backup and archiving of active devices
- g) Export of network topology to JPEG or other standard formats.

2.21 BROCHURES AND TECHNICAL LITERATURE

Tenderers **Must** enclose together with their submitted bids brochures detailing technical Literature and specifications of the CCTV Cameras System and the UPS. The brochures shall be used to evaluate the suitability of the system and the associated accessories. **Any bid submitted without the brochures shall be considered technically non-responsive, and shall subsequently be disqualified.**

PART 3

3.00 TECHNICAL SPECIFICATIONS FOR THE ACCESS CONTROL SYSTEM

3.01 EXTENT OF WORKS FOR ACCESS CONTROL SYSTEM

The main components of an access control system are:

- a) Intelligent System Controller and Server
- b) The proximity card reader
- c) The proximity cards
- d) The magnetic locks
- e) Biometric readers

3.02 THE IP BASED INTELLIGENT SYSTEM CONTROLLER

The controller is the main item for control access system.

The controller shall have a built in power supply, with a battery back up facility and sufficient power to drive the number of doors with access control.

The control should be able to provide time zoning, extensive door monitoring, logging of all events and hardware alarms – output.

User's parameters shall be done locally in the stand alone via a portable and easy to use compact programme using the English Languages Software.

The controller should be able to use the proximity cards, biometric readers or the magnetically encoded keys as identifiers as specified by the engineer.

It shall have the following features;

- Bi- processor Central Processing Unit
- With lead battery back-up with four (4 hrs.) hours autonomy in case of network failure.
- Autonomous clock/calendar chip with automatic management of regular/daylight saving time with autonomy of one hour.
- Management of peer to peer connection with other servers and as a consequence a high decision making capability and full operative autonomy.
- Up to 2500 transactions stored on a removable cartridge with a flash EPROM memory.
- The controller shall be capable of controlling 1No.(one) or 2 No.(two) doors in a stand – alone mode and shall have IP based access functionality.
- Should Have TCP/IP RS485 communication compatibility
- The controller shall have a built in power supply, with a battery backup facility and sufficient power to drive two locks.
- Minimum 4-relays output, 4 readers interface support and Wiegand reader support
- 8 input port for door open sensor monitoring and exit button and minimum 2 user defined input port for link with alarm system.
- 12C Bus Expansion Slot
- In built surge protection
- Control software with access to alarm monitoring, time zones, supervision, activity reports etc.

- The control should be able to provide time zoning, extensive door monitoring, logging of all events and hardware alarms – output, and also real time monitoring.
- Users parameters shall be done locally in the stand alone via a portable and easy to use compact programme using the English Languages Software.
- The controller should be able to use the magstripe cards or the magnetically encoded keys as identifiers.
- The card readers shall have a Pin-pad.
- The power for the reader and for the electric lock shall be supplied via the controller.
- **MUST** have a staff attendance Management System capability.

The server as specified by the Engineer should be able to store the transactions for a minimum of two months. The speed of the server to be such that the programming and communication between the card readers and other interface units is fast.

3.03 BIOMETRIC (FINGER AND RFID) AND PROXIMITY CARD READER

- Shall have biometric state of the art finger print reader.
- Be Bi-directional and meets requirements for HID Proximity cards (standard ISO/ABA 125 KHz, up to 4cm of distance).
- Have Alphanumeric Liquid Crystal Display (LCD), back lit, with two lines of 16 characters each, for the visualization of time data, guide messages for the user, and service messages.
- Should have 2 multicolor LED: Green for the access granted, Red for invalid transaction, Yellow for Echelon Service function.
- Variable Tones for valid/invalid transactions.
- Have a USB Port, RS-485 communication interface, contactless read/write smart card technology Lon Works cabling Interface should be done using unshielded twisted pair cable in free topology. (Transceiver FTT10A, 78Kbps).
- Meets IP31 level of protection.
- At least 1000 fingerprint user capacity.
- At least 1000 valid cards capacity.
- It should be able rated to operate within 0°C ÷ +50°C temperature range.
- It should be rated to operate up to a relative humidity 95% without condensation or as otherwise specified by the engineer for special cases.
- Must meet all laid down international Electromagnetic Compatibility standards.

3.04 PROXIMITY/MAGESTRIPS CARD

The cards shall be of a type and that can accommodate a customer logo, photographs and text should they be required and they shall have a high coercively magnetic strip.

3.05 MAGNETIC DOOR CONTACTS

They shall be of the magnetic reed switch and with appropriate magnet able to handle at least a minimum of 200KN and also of the normally open type

3.06 DOOR ACCESS CONTROLLER

The controller shall be capable of controlling 1No.(one) or 2 No.(two) doors in a stand – alone mode.

The controller shall have a built in power supply, with a battery back up facility and sufficient power to drive two locks.

The control should be able to provide time zoning, extensive door monitoring, logging of all events and hardware alarms – output.

Users parameters shall be done locally in the stand alone via a portable and easy to use compact programme using the English Languages Software.

The controller should be able to use the magstripe cards or the magnetically encoded keys as identifiers.

The card readers shall have a Pin-pad.

The power for the reader and for the electric lock shall be supplied via the controller.

3.07 MAGESTRIPS CARD

The cards shall be of a type that can accommodate a customer logo, photographs and text should they be required and they shall have a high coercivity magnetic strip.

3.08 DOOR CONTACTS

They shall be of the magnetic reed switch and the appropriate magnet and also of the normally open type.

3.09 UNINTERRUPTIBLE POWER SUPPLY (UPS)

This shall be an on-line Un-interruptible power supply with output rating able to provide power to the security surveillance system and controlled access system for a minimum of 8 hours in case of power failure.

It shall be microprocessor- based so that both output voltage and frequency are closely regulated and continuously monitored and also provide system diagnostic and shut down protection functions.

It shall feature a maintenance by-pass to enable normal routine maintenance operations to be performed without interruptions to the system.

It shall be fitted with both visual and audible alarms to indicate any change in equipment status such as:

- input power problems
- ups faults
- ups overload
- battery discharging

Other parameters are:

Input supply:	240VAC50HZ
Power factor:	0.7 lag at full load
Current limit:	125% of the normal
Output voltage:	240V AC 50 HZ
Output voltage tolerance:	2%
Output frequency tolerance:	0.05%

3.10 ACCESS CONTROL SERVER CONTROLLER

- a) Bi-processor CPU68EN302, including a Motorola 68000 (32 Bit architecture) and Ethernet communication processor.
- b) 1 MByte FLASH to download the application firmware.
- c) MByte FLASH EPROM on a removable cartridge for the download of the permanent database and for the transist and events buffer. Optional memory with 8 Mbytes Flash Memory Available.
- d) 1MByte RAM for the activity.
- e) Management of up to 12 Temakeys terminals
- f) Management of up to 64 I/O
- g) Up to 10,000 cards and 2,500 transactions stored on a removable cartridge with flash EPROM memory.
- h) Management of peer to peer connection with the other tema server and as a consequence high decision making capability and full operative autonomy.
- i) Autonomous clock/calendar chip with automatic management of regular /daylight saving time with autonomy of 1.000 hrs in case of power failure.
- j) Lead battery backup with full functionality for 4 hours in case of network failure and signaling o the battery status.

3.11 UNDER VEHICLE SURVEILLANCE SYSTEM

The system should have the following minimum features:

- Ingress Protection – IP68
- Vertical resolution of the image – 10000*5340 pixels
- Speed of vehicle – 1-30km/h
- Camera – intelligent colour progressive line rapid scan CCD imaging
- Weight capacity – less than or equal to 50 tonnes
- Scanning device volume - 1200x350x210mm
- Scanning device weight- 180Kg
- Power Supply: 240V, 50Hz
- Effective field of view – less than 170 Degrees
- Auxiliary light- 150W
- Communication – RJ45/RS485
- Operating temperature: negative 20 to 60 Degrees Celsius
- Scanning mode – linear scan, triggered by loop detector
- CPU - Intel core2 duo 2.4GHz or higher
- Memory- not less than 4GB
- Storage – not less than 500GB
- Monitor – 22”, Resolution 1920x1080
- Boom barrier – not less than 4.5M
- UPS
- Gigabit Switch
- 8 Channel Network Video Recorder
- High immunity to both electrical and mechanical interference
- Easy maintenance
- Should be harmless to: pacemakers, life support systems, pregnant women and magnetic storage media.

PART 4

4.00. TECHNICAL SPECIFICATIONS FOR COMPUTERS AND ACCESSORIES

4.01) SPECIFICATIONS FOR DESKTOP COMPUTERS

ITEM	DESCRIPTION	MINIMUM REQUIREMENTS	BIDDER'S SPECIFICATIONS
A	GENERAL SPECIFICATIONS		
1	Make	BRANDED	
2	Model	HP EliteDesk 800 G1 Desktop	
3	Country of Origin		
4	Manufacturer's brochure and specifications	Must be supplied	
B	TECHNICAL SPECIFICATIONS		
5	Processor	Intel® Core™ i7-4790 with Intel HD Graphics 4600 (3.6 GHz, 8 MB cache, 4 cores)	
6	System Memory	16 GB 1600 MHz DDR3 SDRAM (1 x 4 GB)	
7	Disk cache	Integrated 8MB L2 cache Bus Speed 2700 MHz	
8	Storage sub system	1 TB 7200 rpm SATA SSD	
9		DVD / CD-Writer Drive Memory Card Reader	
10	Display/Graphics	21" TFT Screen (Free standing-Adjustable)	
11	Keyboard	PS/2 Enhanced keyboard	
12	Pointing device	PS/2 Compatible Optical mouse	
13	Audio/ Graphics Systems	❖ PCI 3D audio/video cards ❖ TV/FM cards ❖ Amplified speakers (External)	
14	Communication Interface	❖ 10/100/1000Gbs fast ethernet, RJ 45 jack ❖ 56K ITU V.90 data/fax modern, wake-on-ring ready	
15	Operating System Pre-load plus CDs	Windows 10 Professional 64	
16	Application Software, pre-installed, registered and CDs supplied	MS OFFICE 2017 OR MS OFFICE XP PRO (2017 Version)	
17	Power sub- system	220-240V ac, 50HZ	
18	Power extension cord	At least four outlets with surge protection	
C	WARRANTY	One year parts replacement warrant	

4.02 MEDIUM DUTY LASER PRINTER SPECIFICATIONS

ITEM	DESCRIPTION	MINIMUM REQUIREMENTS	BIDDER'S SPECIFICATIONS
A	GENERAL SPECIFICATIONS		
1	Make	BRANDED	
2	Model		
3	Type	Desktop	
4	Country of Origin		
5	Manufacturer's brochure and specification	Must be supplied	
B	TECHNICAL SPECIFICATIONS		
6	Resolution	1200x1200 dpi	
7	Printing speed	19 ppm	
8	Memory	72 MB	
9	Languages	Enhanced HP PCL, postscript	
10	Maximum Media size	A4 paper	
11	Media types	Plain paper, envelopes, transparencies, labels, postcards	
12	Media input capacity	250 sheet input cassette	
13	Connectivity	❖ IEEE – 1284 compliant bi-directional parallel port ❖ 2.0 compliant USB port	
14	Duty cycle	60,000 pages per month	
15	Operating system support	All windows	
16	C P U	Power PC 405/200 MHZ	
17	Power Supply	240V ac, 50HZ	
18	Power connectivity	Power cable compatible with the printer and 13A socket outlet	
C	WARRANTY	One year parts replacement warrant	

4.03) SPECIFICATIONS FOR UPS

ITEM	DESCRIPTION	MINIMUM REQUIREMENTS	BIDDER'S SPECIFICATIONS
A	GENERAL SPECIFICATIONS		
1	Make	BRANDED	
2	Model		
3	Country of Origin		
4	Manufacturer's brochure and specification	Must be supplied	
B	TECHNICAL SPECIFICATIONS		
5	Rating	3000VA	
6	Input voltage swing	220 – 270V ac	
7	Output voltage	220-240V ac	
8	Output frequency	50-60HZ auto-sensing	
9	Protection	❖ Output overload ❖ Input/output short circuit	
10	Communication Interface	Serial port communication support	
11	Design	❖ Automatic voltage regulation ❖ Mains isolation ❖ User replaceable batteries ❖ Static-automatic bypass ❖ Maintenance bypass	
12	Battery Module	❖ 25 minute backup time ❖ 3 year lifetime ❖ Sealed lead acid type preferred ❖ Automatic periodic battery tests ❖ Short recharge time (maximum 5 hours for 100% run time) ❖ Protection against excessive discharge	

Other Items to be supplied:

- 1) Power Supply extension cable complete with 13A 3pin plug and 4x13A switched socket outlets panel which is complete with inbuilt overcurrent/overvoltage/surge protection

SECTION NAME:

PART C: BILLS OF QUANTITIES

BILLS OF QUANTITIES AND SCHEDULE OF UNIT RATES

CONTENTS

<u>ITEM.</u>	<u>PAGE</u>
1. GENERAL NOTES TO TENDERERS.....	(ii)
2. STATEMENT OF COMPLIANCE.....	(iii)
3. PRICING OF ITEMS	(iv)
3. BILLS OF QUANTITIES	BOQ –D3 to BOQ –D23
4. SUMMARY PAGE.....	Summary Page – D24
5. SCHEDULE OF UNIT RATES.....	SU-1 - SU-2
6. TECHICAL SCHEDULE	TS-1 - TS-2

GENERAL NOTES TO TENDERERS

1. The Bills of Quantities form part of the contract documents and are to be read in conjunction with the contract drawings, general specifications of materials and works and particular specifications of materials
2. The prices quoted shall be deemed to include for all obligations under the sub-contract including but not limited to supply of materials, labour, delivery to site, storage on site, installation, testing, commissioning and all taxes (**including 16% VAT**).

In accordance with Government policy, the 3% Withholding Tax **shall be deducted** from all payments made to the Tenderer, and the same shall be forwarded to the **Kenya Revenue Authority (KRA)**.

- 3 All prices omitted from any item, section or part of the Bills of Quantities shall be deemed to have been included to another item, section or part thereof.
4. The brief description of the items given in the Bills of Quantities are for the purpose of establishing a standard to which the sub-contractor shall adhere. Otherwise alternative brands of **equal** and **approved** quality will be accepted.

Should the sub-contractor install any material not specified here in before receiving **written approval** from the Project Manager, the sub-contractor shall remove the material in question and, **at his own cost**, install the proper material.

5. The grand total of prices in the price summary page must be carried forward to the **Form of Tender for the tender to be deemed valid**.
6. Tenderers must enclose, together with their submitted tenders, detailed coloured manufacturer's Brochures detailing Technical Literature and specifications on all the equipment they intend to offer e.g. Standby Battery and UPS, Data Switches and Routers etc.

The brochures are to be used to ascertain the suitability of the ACTIVE electronic components, PABX, Telephone Instruments and Standby Battery being offered by the bidders. Bidders not complying with this requirement shall be considered technically non-responsive and may subsequently be disqualified.

Statement of Compliance

- a) I confirm compliance of all clauses of the General Conditions, General Specifications and Particular Specifications in this tender.

- b) I confirm compliance to the items specified in technical catalogues and brochures I have attached as required in the technical schedule.

Name:

Capacity..... *(Person with power of attorney)*

Signed: *for and on behalf of the Tenderer*

Date:

Official Rubber Stamp:

PRICING OF ITEMS.

The Bills of Quantities are divided generally into three sections:-

Preliminaries – Bill 1

Prices will be inserted against item of preliminaries in the sub-contractor's Bills of Quantities and specification. These Bills are designated as Bill 1 in this Section.

Where the sub-contractor fails to insert his price in any item he shall be deemed to have made adequate provision for this on various items in the Bills of Quantities. The preliminaries form part of this contract and together with other Bills of Quantities covers for the costs involved in complying with all the requirements for the proper execution of the whole of the works in the contract

Sub-contractors preliminaries are as per those described in section C – sub-contractor preliminaries and conditions of contractor.

The sub-contractor shall study the conditions and make provision to cover their cost in this Bill. The number of preliminary items to be priced by the Tenderer have been limited to tangible items such as site office, temporary works and others.

However the Tenderer is free to include and price any other items he deems necessary taking into consideration conditions he is likely to encounter on site.

Electrical installation Items – Bill 2

The brief description of the items in these Bills of Quantities should in no way modify or supersede the detailed descriptions in the contract Drawings, conditions of contract and specifications.

Summary – Bill 3

The summary contains tabulation of the separate parts of the Bills of Quantities carried forward with provisional sum, contingencies and any prime cost sums included. The sub-contractor shall insert his totals and enter his grand total tender sum in the space provided below the summary.

This grand total tender sum shall be entered in the Form of Tender provided elsewhere in this document

BILL NO. 5: IP-CCTV INSTALLATION WORKS

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
Supply, Install, Program, Test and Commission the following :-					
<u>IP-CCTV SURVEILLANCE SYSTEM CAMERAS</u>					
A	5Megapixel resolution Network IR Indoor Dome Day & Night Camera; 3 ~ 8mm (2.8x) motorized varifocal lens, WDR (120dB), 64GB Edge Storage, R LED (12ea), PoE, IK8, Bi-directional audio support and 3year warranty c/w brackets and accessories as Axis or equal and approved equivalent.	30	No.		
B	5Megapixel resolution Network Indoor Bullet Camera; 3 ~ 8mm (2.8x) motorized varifocal lens; Simple focus (Motorized VF), P-Iris; Day & Night (ICR), Enhanced DIS, Defog; 3M real-time WDR (Max. 120dB); 64GB Edge Storage, IK8, Bi-directional audio support and 3year warranty c/w brackets and accessories as Axis or equal and approved equivalent.	19	No.		
C	5Megapixel resolution Network Outdoor Bullet Camera; 3 ~ 8mm (2.8x) motorized varifocal lens; Simple focus (Motorized VF), P-Iris; Day & Night (ICR), Enhanced DIS, Defog; 3M real-time WDR (Max. 120dB); 64GB Edge Storage, IP66, IK10, Bi-directional audio support and 3year warranty c/w brackets and accessories as Axis or equal and approved equivalent.	5	No.		
D	5Megapixel resolution Full HD 32x Network IR PTZ Dome Camera; 4.5 ~ 135mm (32x) IR corrected optical zoom, 16x digital zoom; Day & Night (ICR), WDR (120dB); Auto tracking, Intelligent video analytics; SD/SDHC/SDXC memory slot, Bi-directional audio support; IP66, IK10 and 3year warranty c/w brackets and accessories as Axis or equal and approved equivalent.	5	No.		
E	Camera Housing	10	No.		
<u>ACTIVE COMPONENTS</u>					
F	48 Port Edge Switch as Cisco Catalyst 9200 Series Complete with 2No. Power Supply, 10G and 40G uplink ports, POE or its equal and approved equivalent.	2	No.		
G	Power Distribution Units (PDU) 6/8 way Surge Protected /Triplite Voltage Regulator	2	No.		
<u>BACKBONE CABLING AND GENERAL REQUIREMENTS</u>					
H	Multi Mode Fiber Optic 8 Core Cable (Armoured) for interlinking other Floors to Server Room complete with connectors to Active Components and all terminations to active equipment i.e., Floor Edge Switch.	200	Lm.		
I	SFP Fibre Modules as CISCO or approved equivalent.	4	No.		
J	SC-SC fibre Patch Cord.	8	No.		
Sub-Total C/F to Next Page					

IP-CCTV INSTALLATION WORKS CONT'D

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
Sub-Total B/F from Previous Page					
<u>CABINETS</u>					
A	42U Wall mounted equipment cabinet with lockable door, low noise (low Db) fans and power outlet sockets (Additional 12-Way smart power distribution unit, surge protected within the cabinet).	2	No.		
B	48 Port UTP Patch Panel as Siemon or its equal and approved equivalent C/W all the necessary accessories.	2	No.		
C	Cat 6A, UTP 2U, Cable Manager (Organizer) as Siemon or its equal and approved equivalent C/W all the necessary accessories.	12	No.		
D	240V, 50Hz, 5000VA, Rack Mountable Double Conversion APC smart un-interrupted power supply unit (UPS) TRUE online INCLUDING Batteries with USB and Serial Port or an approved equivalent.	2	No.		
E	450mm x 50mm deep Deep Perfotrated GI cable tray complete with all accessories As Manufactured by Power Technics or approved equivalent.	200	Lm.		
F	Grounding and bounding kit complete with 50mm diameter copper bounding bar and 6mm thick green and yellow wire. The Earthing of the system is to be to the approval of the Engineer.	1	Lot		
<u>CABLING</u>					
G	Cat 6A, STP 4 Pair cable as Siemon or its equal and approved equivalent.	42	Rolls(310 m)		
H	1M, Cat 6A, UTP factory terminated Patch Cords as Siemon or its equal and approved equivalent.	59	No.		
I	3M, Cat 6A, UTP factory terminated Patch Cords as Siemon or its equal and approved equivalent.	20	No.		
J	32mm Flexible Conduits in metres	200	Lm.		
K	20mm Flexible Conduits in metres	100	Lm.		
L	Cable ties, Wrap Markers, Tower clips, Insulating Tapes, Masking Tapes e.t.c.	1	Item		
<u>STORAGE</u>					
M	64 CH Network Video Recorder (NVR); 100Mbps network camera recording; Embedded Linux OS; Up to 8/6 RAID-5 + Hot standby; SATA Internal HDDs; External e-SATA (2 ports), iSCSI storage (Max. 64TB) iSCSI storage supported. (No IP Camera Licenses required) 3year warranty. as Axis or approved equivalent.	2	No.		
N	12TB Surveillance SATA HDD Suitable for NVR ABOVE.	6	No.		
Sub-Total C/F to Next Page					

IP-CCTV INSTALLATION WORKS CONT'D

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
	Sub-Total B/F from Previous Page				
A	CCTV and Access Control dedicated Desktop Computer, Intel corei7, 64-bit, 8GB Video Graphics Card Processor/3.6GHz Quad-core/16GB System RAM/4TB SSD/DVD RW/ win10/43" Screen of Multi-Monitor Support complete with a printer as specified in particular specifications for central monitoring.	2	No.		
B	Central IP Video Surveillance Management Software for viewing and Recording live video of premises with support for multi-site / multi-client monitoring (for upto 4 No. client stations).	1	No.		
B	CCTV server system.	1	No.		
C	Industrial Grade, 55" LED screen, FH ,Panel Life 50,000hours, Contrast Ratio 5,000 : 1, HDMI, DVI, VGA, and component (CVBS common) video output, Ethernet / RS-232C remote control, Built-in speaker c/w wall mount bracket); 3year warranty.	4	No.		
D	Allow for preparation and production of 3No. Sets of "As Installed Drawings" for all Works in this Contract (Hard & Soft Copies in AutoCAD 2018)	1	Item		
E	Allow for a Provisional Sum of Kshs 1,000,000.00 for Contingency				
TOTAL FOR IP-CCTV INSTALLATION WORKS C/F TO SUMMARY PAGE					

BILL NO. 6: ACCESS CONTROL INSTALLATION WORKS

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
	Supply, Install & Program, Test and Commission the following items:-				
	<u>Access Control System</u>				
A	IP Based Single Door Access Controller complete with accessories as specified in particular specifications as ZKTeco or approved equivalent.	11	No.		
B	IP Based Double Door Access Controller complete with accessories as specified in particular specifications ZKTeco or approved equivalent.	4	No.		
C	An Electromagnetic Lock of 300Kg Force complete with striking plates installed on each door	15	No.		
D	IP Based Door Reader with Biometric (Finger) and Proximity Card Reader and complete with keypad and USB port as specified in Particular Specifications ZKTeco or approved equivalent.	15	No.		
E	Exit Slave Door Reader with Biometric, Keypad and Proximity Card Capabilities.	15	No.		
F	Emergency Break Glass	15	No.		
G	Override Key Switch	15	No.		
H	Access Control Door Intelligent Power Supply Module complete with batteries as specified in Particular Specifications.	15	No.		
I	Proximity Cards with the individual employee's name as specified in Particular Specifications.(Provisional)	50	No.		
J	EBI software including Tema Module	6	No.		
K	Access Control Server Controller for 50 doors as specified in Particular Specifications.	3	No.		
L	Wire the entire access control system using 12 core 2.5mm ² fire resistant cable.	2,000	Lm.		
M	Door Exit Switch	54	No.		
N	Cat 6A, 4 Pair, STP Cable for Access Control System as Siemon or Approved Equivalent	1,800	Lm.		
O	24 Port UTP Patch Panel as Siemon or its equal and approved equivalent C/W all the necessary accessories.	2	No.		
Sub-Total C/F to Next Page					

ACCESS CONTROL WORKS CONTINUED...

Item	Description	Qty	Unit	Rate (Kshs)	Amount (Kshs)
	Sub-Total B/F from Previous Page				
A	240V, 50Hz, 1500KVA, Rack Mountable Double Conversion APC smart un-interrupted power supply unit (UPS) TRUE online INCLUDING Batteries with USB and Serial Port or an approved equivalent.	3	No.		
B	24 Port Edge Switch as Cisco Catalyst 9200 Series Complete with 2No. Power Supply, 10G and 40G uplink ports, POE or its equal and approved equivalent.	2	No.		
C	Allow for full graphic customization and programming of the installed system.	1	Lot		
D	Power Point wired in 3x2.5mm sq. single core PVC insulated copper cables drawn in concealed 25 mm diameter Heavy Gauge PVC conduits complete with all the necessary accessories.	15	Lm.		
E	Unswitched spur power point complete with socket plate.	15	No.		
G	50mm x 50mm, 2 compartment powder coated 'CLIP-ON' metal type trunking as Schneider manufactured to approved colour and complete with cover, bends, outlet plates, continuity bonding and all accessories.	650	Lm.		
H	Automatic Door Closure	15	No.		
A	Intruder alarm points using 12 Core 6 Pair Round Professional Screened Copper PVC Intruder Burglar Alarm Security Cable drawn in 25mm HG conduits concealed in the walls and floor slab.	15	No.		
B	Vibration electromagnetic sensors embedded in the doors and windows as Honeywell or approved equivalent	15	No.		
C	Panic buttons as Honeywell or approved equivalent	15	No.		
D	Passive infrared motion sensors in the hall way within the house as Honeywell or approved equivalent.	10	No		
E	Access control keypad at the main door entrance wired to the control panel as Honeywell or approved equivalent	5	No		
F	Flasher/ sounder 240v bell as Honeywell or approved equivalent.	5	No		
G	Security alarm control panel as Honeywell or approved equivalent	4	No		
H	Power point comprising wiring in 3x2.5mm ² PVC-SC-CU cables in concealed PVC conduits	4	No.		
I	20 Amps double pole switches with neon indicator as Clipsal or approved equivalent for item above	4	No.		
J	Allow for preparation and production of 3No. Sets of "As Installed Drawings" for all Works in this Contract (Hard & Soft Copies in AutoCAD 2018)	1	Item		
K	Allow for a Provisional Sum of Kshs 1,000,000.00 for Contingency				
TOTAL FOR ACCESS CONTROL INSTALLATION WORKS C/F TO SUMMARY PAGE					

MAIN SUMMARY PAGE

ITEM	DESCRIPTION	AMOUNT (KSHS)
1.00	PRELIMINARIES	
2.00	Total for Bill No. 5: IP-CCTV Installation Works	
3.00	Total for Bill No. 6: Access Control Installation Works	
4.00	Allow for a Provisional Sum for training of staff on the operation and working of the installations	300,000.00
	TOTAL CARRIED FORWARD TO THE FORM OF TENDER	

Total Amount in Words (Kenya Shillings)

.....

Total Amount in Words (Kenya Shillings)

.....

Bidder's Name & Official Stamp

.....

P.O. Box

Signature **Date**

PIN NO **V.A.T Certificate NO**

Witness **Address**

Signature of Witness **Date**

SECTION NAME:

PART D: SCHEDULE OF UNIT RATES

SCHEDULE OF UNIT RATES

1. The tenderer shall insert unit rates against the items in the following schedules and may add such other items as he considers appropriate.
2. The unit rates shall include for supply, transport, insurance, delivery to site, storage as necessary, assembling, cleaning, installing, connecting, profit and maintenance in defects liability and any other obligation under this contract.
3. The unit rates will be used to assess the value of additions or omissions arising from authorised variations to the contract works.
4. Where trade names or manufacturer's catalogue numbers are mentioned in the specification, the reference is intended as a guide to the type of article or quality of material required. Alternative brands of **equal** and **approved** quality will be accepted.

SECTION NAME:

PART E: TECHNICAL SCHEDULE

TECHNICAL SCHEDULE OF ITEMS TO BE SUPPLIED CONTENTS

- | | | |
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TECHNICAL SCHEDULE

I. General Notes to the Tenderer

- 1.1 The tenderer shall submit technical schedules for all materials and equipment upon which he has based his tender sum.
- 1.2 The tenderer shall also submit separate comprehensive descriptive and performance details for all plant apparatus and fittings described in the technical schedules. Manufacturer's literature shall be accepted. Failure to comply with this may have his tender disqualified.
- 1.3 Completion of the technical schedule shall not relieve the Contractor from complying with the requirements of the specifications except as may be approved by the Engineer.
- 1.4 The tenderer **MUST** complete in full the technical schedule.
- 1.5 Apart from the information required in the technical schedule, the tenderer **MUST SUBMIT** comprehensive manufacturer's technical brochures and performance details for all items listed in this schedule (fill forms attached).

TECHNICAL SCHEDULE OF ITEMS TO BE SUPPLIED

(To be completed by the Tenderer as a Mandatory Requirement)

ITEM	DESCRIPTION	TYPE/MAKE/CATALOGUE No.	COUNTRY OF ORIGIN
1.0	IP PTZ Camera		
2.0	TV Monitors		
3.0	Plasma Screens		
4.0	VGA splitter		
5.0	Video switcher		
6.0	UPS		
7.0	VGA cables		
8.0	RCA cables		

The tenderer shall also submit separate comprehensive descriptive and performance details for all plant apparatus and fittings, as described in the technical schedule.

TECHNICAL SCHEDULE OF ITEMS TO BE SUPPLIED

(To be completed by the Tenderer as a Mandatory Requirement)

ITEM	DESCRIPTION	TYPE/MAKE/CATALOGUE No.	MODEL	COUNTRY OF ORIGIN
1.0	Camera			
2.0	Network Video Recorder			
3.0	CAT 6A cables			
4.0	Network Switches			
5.0	Fiber Cable			
6.0	Workstation			
7.0	Access Control Proximity Card Readers			
8.0	IP-PABX			

SECTION NAME:

PART F: STANDARD FORMS

STANDARD FORMS

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NOTE: ALL FORMS IN THIS SECTION MUST BE FILLED AS THEY SHALL BEPART OF THE EVALUATION CRITERIA

TENDER QUESTIONNAIRE

Please fill in block letters.

- 1. Full names of Tenderer:
.....

- 2. Full address of Tenderer to which tender correspondence is to be sent (unless an agent has been appointed below):
.....

- 3. Telephone number (s) of Tenderer:
.....

- 4. Name of Tenderer’s representative to be contacted on matters of the tender during the tender period:
.....

Signature of Tenderer

CONFIDENTIAL BUSINESS QUESTIONNAIRE

You are requested to give the particulars indicated in Part 1 and either Part 2 (a), 2 (b) or 2(c) and (2d) whichever applies to your type of business.

You are advised that it is a serious offence to give false information on this Form.

Part 1 – General

Business Name

Location of business premises: Country/Town.....

Postal Address..... Tel No.....

Nature of Business.....

Current Trade Licence No..... Expiring date.....

Maximum value of business which you can handle at any time:

Kenya Shillings.....

Name of your bankers.....

Branch.....

Part 2 (a) – Sole Proprietor

Your name in full..... Age.....

Nationality..... Country of Origin.....

Part 2 (b) – Partnership

Give details of partners as follows:

	<i>Name in full</i>	<i>Nationality</i>	<i>Citizenship Details</i>	<i>Shares</i>
1.
2.

Part 2(c) – Registered Company

Private or Public

..... State

the nominal and issued capita of the company:

Nominal KShs.

Issued KShs.

Give details of all directors as follows:

	<i>Name in full</i>	<i>Nationality</i>	<i>Citizenship Details*</i>	<i>Shares</i>
1.
2.
3.
4.

KEY PERSONNEL

Qualifications and experience of key personnel proposed for administration and execution of the Contract.

POSITION	NAME	YEARS OF EXPERIENCE (GENERAL)	YEARS OF EXPERIENCE IN PROPOSED POSITION
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			

I certify that the above information is correct.

.....
Title

.....
Signature

.....
Date

CONTRACTS COMPLETED IN THE LAST FIVE (5) YEARS

Work performed on works of a similar nature and volume over the last five years.

<u>PROJECT NAME</u>	<u>NAME OF CLIENT</u>	TYPE OF WORK AND YEAR OF COMPLETION	VALUE OF CONTRACT (Kshs.)

I certify that the above works were successfully carried out and completed by ourselves.

.....
Title

.....
Signature

.....
Date

FINANCIAL REPORTS FOR THE LAST FIVE YEARS

(Balance sheets, Profits and Loss Statements, Auditor's reports, etc. List below and attach copies)

- 1. _____.
- 2. _____.
- 3. _____.
- 4. _____.
- 5. _____.
- 6. _____.
- 7. _____.
- 8. _____.
- 9. _____.
- 10. _____.

EVIDENCE OF FINANCIAL RESOURCES TO MEET QUALIFICATION REQUIREMENTS
(Cash in Hand, Lines of credit, e.t.c. List below and attach copies of supportive documents.)

1. _____.
2. _____.
3. _____.
4. _____.
5. _____.
6. _____.
7. _____.
8. _____.
9. _____.
10. _____.

NAME, ADDRESS AND TELEPHONE,
(This should be for banks that may provide reference if contacted by the employer)

NAME	ADDRESS	TELEPHONE	EMAIL	ACCOUNT STATION

DETAILS OF LITIGATIONS OR ARBITRATION PROCEEDINGS IN WHICH THE TENDERER IS INVOLVED AS ONE OF THE PARTIES

1. _____.
2. _____.
3. _____.
4. _____.
5. _____.
6. _____.
7. _____.
8. _____.
9. _____.
10. _____.

**SCHEDULE OF MAJOR ITEMS OF CONTRACTOR'S EQUIPMENT PROPOSED FOR
CARRYING OUT THE WORKS**

ITEM OF EQUIPMENT	DESCRIPTION, MAKE AND AGE (Years)	CONDITION (New, good, poor) and number available	OWNED, LEASED (From whom?), or to be purchased (From whom?)