

## **BIDDING & CONTRACT**

### **DOCUMENTS**

Supply, Installation, Testing & Commissioning (SITC ) of CCTV surveillance system , X Ray BIS( Baggage Inspection system ) ,HHMD ( Hand held Metal Detector), Hand Held Walkie-talkie, DFMD(Door Frame metal detector) , on turnkey basis in Jawahar Vyapar Bhawan,1-Tolstoy Marg, Delhi

**THE STATE TRADING CORPORATION OF INDIA LIMITED**

## INDEX

SL.NO.	Description	Page Nos. From – To
1	Notice Inviting Tender	3-4
2.	Instruction for filling e tender	5-6
3	Definition	7-8
4	Criteria for technical evaluation	9
5	General Conditions of Contract -A	10-13
6	Forms of Tender	14-15
7.	Letter of submission	16-17
8.	Letter for unconditional acceptance of bid	18-19
9.	Past contractual performance	20
10	Articles of Agreement	21-22
11.	Performance Bank Guarantee Format	23-25
12	General Conditions of Contract -B	26-36
13	Financial terms and other terms	37-48
14	Schedule of Fiscal Aspects	49
15	Scope of supply and scope of work	50-56
16	Technical Specs.	57-93
17	Comprehensive AMC	94-95
18	Price Bid /Schedule of Quantities	96-99

**The State Trading Corporation Of India Ltd.  
(A Public Sector Undertaking, G.O.I. )**

**NOTICE INVITING TENDER- E Tender Process**

Tender Ref :- STC/JVB/BPMD/CME/D 382/ Dated 26.3.16

1. Bids are invited in two part bidding process **online ( e-tendering process )** via limited tender process from enlisted PSUs only , for the work of Supply, Installation, Testing & commissioning (SITC ) of CCTV surveillance system , X Ray BIS( Baggage Inspection system ) ,HHMD ( Hand held Metal Detector), Hand Held Walkie-talkie, DFMD(Door Frame metal detector) on turnkey basis , in Jawahar Vyapar Bhawan,1-Tolstoy Marg, Delhi.

**The bids have to be submitted on line only.**

Sr. No.	Particular	Details
1	Bid issue site	www.eprocure.gov.in
2.	Tender document fee	Rs. 1000.00 (including VAT)
3.	Tender floating date	26.3.15
4.	Pre bid meet date & Venue	4/4/16 at 3:00 pm, knowledge centre, JVB, STC
5.	Uploading date of pre bid conclusions , amendments	8/4/15
6.	Last Date of issue of tender from STC	22.4.16 up to 3: 00 PM
7.	Date and time of submission the of scanned tender documents with all necessary documents in the e tender portal , physical submission of financial instrument.	22.4.16 up to 3: 00 PM
8.	Date and time of opening of tender ( Technical Bid-I)	22.4.16 up to 3: 30 PM
9	Venue of opening	eprocure.gov.in.
10	Date and time of opening of Price Bid of tender ( Part-II)	Shall be intimated later to the successful bidders in technical bid.

11.	Amount of earnest money to be deposited (EMD) ( By DD/ Banker's Cheque)	Rs. 3.25 lakhs
12.	Submission of EMD and non-refundable bidding fees	Tender box kept on reception of Jawahar Vyapar Bhawan, Tolstoy Marg, New Delhi- 110001, closing time of bid , put in an envelope subscribing name of the contractor and tender details

**Note :-**

1. Any Deviation from tender conditions shall result into technical disqualification.
2. All the tender documents should be signed by the bidder as a token of acceptance and shall be submitted in PDF format on line .
- 3.. If the dates mentioned above happens a Holiday in STC, the next working day shall be considered as mentioned date.

**The State Trading Corporation Of India Ltd.**

**(A Public Sector Undertaking, G.O.I. )**

**Instruction for filling the e tender**

- 1 Bids are invited via limited tender enquiry process for Supply, Installation, Testing & Commissioning (SITC ) of CCTV surveillance system , X Ray BIS ( Baggage Inspection system ),HHMD ( Hand held Metal Detector), Hand Held Walkie-talkie, DFMD(Door Frame metal detector), in Jawahar Vyapar Bhawan,1-Tolstoy Marg, Delhi
2. Bids have to be submitted on line only via <http://eprocure.gov.in/eprocure> (the e-procurement portal of NIC (eprocure.gov.in/eprocure). No bids shall be accepted in hard copy or any other form.
3. For submission of e bids, bidders are required to get them registered with NIC's central Public Procurement ( CPP) portal ( <http://eprocure.gov.in/eprocure>) using class-II/Class – III digital signature certificate. All the details mentioned during registration / enrolment process should be correct / true. Bidders have to abide by all the terms and conditions mentioned during registration process.
4. Any Financial instrument such as tender fee, earnest money deposit ( EMD) and which are required to be submitted in the desired form must reach STC before closure of the tender. The details of financial instrument entered during the e bid submission should tally with those submitted physically. Otherwise, the bid may be rejected.
5. The bidders are required to upload soft copies of all relevant documents.
6. Bidders are advised in their own interest to submit the on line bids well before the bid document submission end date and time ( as per server system clock of CPP). STC will not be responsible for any delay or the difficulties encountered during submission of bids at the eleventh hour due any technical or other problems.
7. For any queries relating to the process of online bid submission or queries relating to Procurement Portal (eprocure.gov.in), the bidders may contact CPP Portal Helpdesk on Tel No's.: 1800-3070-2232, 91-7878007972, 91-7878007973, 91-7574889871 and 91-7574889874.
8. Bidders may regularly visit STC website for any information / clarification / addendum / corrigendum etc. related to this tender, processing of bids received, award of job, pre

bid meet decisions etc. STC shall not be liable to send any individual information or publish a public notice for any further information regarding this tender in newspapers.

9. Portal for Online Submission [www.eprocure.gov.in](http://www.eprocure.gov.in)
10. Bid Copies along with supporting documents to be submitted : Online
- 11.. Following documents are required to be uploaded online of the bid:
  - Scanned copy of all the documents as required for bid submission
  - Scanned copy of demand draft/ banker' s cheque toward bidding fee
  - Scanned copy of demand draft/ banker' s cheque towards EMD
12. A bidder may modify, substitute or withdraw its e-bid after submission before the last date and time of bid submission. No bids shall be modified, substituted or withdrawn by the bidder on or after the last date and time of bid submission. For modification of e-bids, bidder has to detach its old proposal from e-tendering portal and upload/resubmit digitally signed modified bid.
13. STC may ask the bidders to submit any or all the documents in original submitted as part of their online bid anytime during the bid process
14. If there is a discrepancy between words and figures, the amount in words shall prevail. However, where the amount expressed in words does not represent arithmetically correct total, the amount in figures shall prevail.
15. It shall be the bidder's responsibility to ensure that adequate documentary proof is provided in the bid for each of the technical evaluation
- 16.. The bid document available on e- procurement portal shall be taken as final

## **DEFINITIONS**

1. “Application” shall mean the request submitted by interested parties for obtaining the bid document.
2. ‘Bid/Tender’ shall mean documents issued by STC to the prospective bidder.
3. “Bid Security/Earnest Money/EMD” shall mean the amount to be deposited by the Bidder with the Bid.
4. “Bid Validity” shall mean the period for which the Bids shall remain valid.
5. “Bidder” shall mean the party participating in the Bidding process pursuant to and in accordance with the terms of this document.
6. “Contract Agreement” shall mean the agreement to be signed between the Successful bidder and the nominee of the competent authority on behalf of STC.
7. “Contract Price” shall mean the financial bid of the Successful Bidder as accepted by the STC.
8. “Date of commencement of work” shall mean the date of start as communicated by Letter of intent or work order.
9. “Defects Liability Period/Maintenance Period” means the period after completion of the contract during which the STC or his authorized representative/Engineer-in-charge will notify to the Contractor any defect noticed in the work and the contractor is liable for, replacing or repair the same as provided under the Terms of the Contract/ Document. Proof of dispatch of letter notifying the defect/intimating the representative of Contractor at site on the last date of Defect Liability period will make the contractor liable for rectifying all such defects.
10. “Engineer in Charge (EIC)” means the authorized representative nominated by STC.
11. “Tender Evaluation Committee” shall mean the committee constituted by STC for the evaluation of the bids.
12. “Letter of Award/Notification of Award” shall mean the letter issued by the STC to the successful bidder inviting him to sign the contract agreement.
13. ‘STC’ shall mean The State Trading Corporation of India Limited having its registered office at Jawahar Vyapar Bhawan, Janpath, Connaught Place ,Delhi

14. The Contractor shall mean the sole proprietor, or contractor or company whether incorporated or not, undertaking the works and shall include the legal representative or such individual successors, heirs, administrators or assignees of such sole proprietor, contractor or company, as the case may be or the persons composing such contractor or company of the successor of such contractor or company and the permitted assignees of such individual or contractors or contractors or company.
15. Engineer-in-charge shall mean the officer designated by STC who shall supervise and in charge of the work, and issue necessary instructions at site, on behalf of STC.
16. "Performance Security/Performance Bank Guarantee" shall mean the amount to be paid by the successful bidder as per relevant clause mentioned in the tender document.
17. "Work" means Supply, Installation, Testing & Commissioning (SITC) of CCTV surveillance system, X Ray BIS( Baggage Inspection system), HHMD ( Hand held Metal Detector), Hand Held Walkie talkie, DFMD(Door Frame metal detector), in Jawahar Vyapar Bhawan, 1-Tolstoy Marg, Delhi
18. "Site: shall mean the place where the works under the Contract are to be carried out and the details of which are provided in this document.
19. "Successful Bidder" shall mean the bidder who has been declared technically qualified and the bid has been accepted by competent authority of STC. The successful bidder has to sign the contract agreement.
20. "Scheduled Banks" mean Scheduled Commercial Banks of Govt. of India.
21. Order placing authority means: - The officer who is issuing or Placing detailed work order to the contractor.

Chief Manger (Elect.)  
State Trading Corporation of India Ltd.



### **Criteria for Technical Evaluation**

Following documents must be submitted with technical bid for technical evaluation:

Name of Work- Supply, Installation, Testing & Commissioning (SITC ) of CCTV surveillance system , X Ray BIS( Baggage Inspection system ) ,HHMD ( Hand held Metal Detector), Hand Held Walkie-talkie, DFMD(Door Frame metal detector) , on turnkey basis in Jawahar Vyapar Bhawan,1-Tolstoy Marg, Delhi

(I) Three similar works each costing not less than Rs. 70,00,000 or two similar work each costing not less than Rs. 85,00,000=00 or one similar work costing not less than Rs 135,00,000 in last 7 years ending last day of the month to the bids are invited.

Similar work means the work of Supply, Installation, Testing & Commissioning (SITC ) consisting combination of CCTV surveillance system , X Ray BIS( Baggage Inspection system ) DFMD(Door Frame metal detector) or any of these items , on turnkey basis in Central Govt./PSU/State PSU/ State Govt. undertaking.

(II ) The bidder will have to produce satisfactory performance report of the above work experience from order placing authority or higher.

(III) The bidder should be financially capable for execution of the work as per NIT specification. For this purpose Bidder should have positive net worth and profitable during last 3 financial years. Documentary proof to be submitted along with technical bid

(IV) The bidder should enclose the Earnest money (E.M.D.) of an amount of Rs. 3,25,000=00 and Rs. 1000=00 as tender fee ( including VAT ) in the form of Crossed Bank Draft / Bankers Cheque payable to the State Trading Corporation of India Ltd payable at New Delhi at the time of bidding.

(V) Any other documents needed as per bid document.

Note: - The firm has to strictly follow the list of approved makes mentioned in the tender. However, proposed make should comply with the other tender technical specification

Chief Manager-Elect.  
State trading Corporation of India Ltd.

**General Contract Conditions                      Section "A"**

**INSTRUCTION TO BIDDERS:-**

DEFINITION: - The term 'Corporation' wherever appearing in this specification would mean State Trading Corporation of India Ltd. and shall include the nominated person authorized to place an order this specification.

**1.0 PREPARATION OF TENDER:-**

- 1.01 Before submission of the tender, the Bidders are requested to have themselves fully conversant with the "Pre-Qualification Requirement "specification, nature of work, the site conditions and general conditions of contract etc., so that, no ambiguity arises at a later date in this respect. They may visit the site for seeing the actual working conditions and the nature of work.
- 1.02 Only such contractors need to submit bids which meets the criteria as laid down in the tender documents and those can submit satisfactory evidence in that regard.
- 1.03 The Corporation reserves the right to revise, amend or cancel the tender at any stage of tendering process & also the right to postpone the date for opening of tender without assigning any reason.
- 1.04 If the Bidder deliberately furnishes wrong information in his tender, the bid would be liable to be rejected out rightly at any stage and the security deposit and/or EMD/ Dues to STC, shall be forfeited
- 1.05 Tender document are not transferable. JV (Joint Ventures) contractors are not allowed to participate in the tender.
- 1.06 Not more than one tender for the work shall be submitted by one contractor or one contractor of contractor.
- 1.07 The Corporation shall not be liable for expenses incurred by the Bidder in the preparation of the tender whether his tender is accepted or not.

- 1.08. Bids containing any alterations/cuttings/marks of eraser etc even if accompanied by signature shall be liable to be rejected on such grounds.
- 1.09 Successful L-1 bidder shall be decided on the basis of total price quoted in the price bids section
- 1.10 Tenders submitted by courier/post liable/ manual submission to be rejected. Only electronic submission is accepted.
- 1.11 Partial bidding shall be rejected. .
- 1.12 The tender is to be furnished in two parts i.e. PART-I (Techno-commercial bid) & PART-II (Price Bid); All the tender document digitally signed accompanied by documents in support of pre-qualifying requirement / tender enquiry , scanned copy of financial instrument ( for EMD and tender fee ) should be uploaded to the <http://eprocure.gov.in/eprocure>
- 1.13 The Part-I i.e. Techno-commercial Bid will be opened on the scheduled date and time online.
- 1.14 The bidder whose Part-I (Techno- Commercial bid) bids have been found acceptable, shall be intimated through written communication and / or through telephonically as the case may be. The price bid of these technically qualified bidders shall be opened on the scheduled due date and time on line.
- 1.15 Intimation regrading date, time of opening of price bid shall be intimated on line to the technically qualified bidders. .
- 1.16 STC reserves the right to accept or reject any bid, and/or to annul the bidding process and reject all bids, at any time prior to award the contract, without thereby incurring any liability from the affected bidder or bidders nor shall STC have any obligations to inform the affected bidder or bidders of the grounds for STC's action.
- 1.17 STC reserves the right to nominate or replace the Engineering in charge during the currency of contract period or during the tender process.

## **2.0 Earnest Money Cost of tender document:-**

- 2.01 Before submitting the tender, the Bidder shall deposit an amount as indicated on cover page as earnest money, the cost of tender document in the form of crossed Bank draft / Bankers Cheque payable to the State Trading Corporation of India Ltd payable at New Delhi.
- 2.02 Any tender not accompanied with EMD, cost of tender document is liable to be rejected. The bidder has to upload the scanned copy of EMD, tender document fee online and physically submit the EMD, tender document fee in the tender box placed at the reception before /on the tender closing date.
- 2.03 In case of unsuccessful bidders the earnest money will be refundable on application after award of work to the successful bidder.
- 2.04 Request for adjustment/appropriation of earnest money/deposits if any already lying with the Corporation in connection with some other tender/orders/works shall not be entertained.
- 2.05 No interest shall be payable on earnest money deposits.

## **3.0 General Terms:-**

- 3.01 The Corporation is not liable to accept the lowest or any other bid and shall not assign itself to accept the lowest or any other tender and will not assign any reason(s) for the rejection of any tender or a part there of.
- 3.02 The tenderer shall treat the details of specification and other tender documents as and confidential and they shall not be reproduced anywhere without the written authorization of the Corporation.

## **4.0 RECEIPT OF TENDERS :-**

- 4.01 The tenders should be filled on line as detailed above. No other form of tender submission shall be accepted.

## **5.0 DEVIATIONS:-**

5.01 Bids containing deviations from the specifications and general condition of contract shall be liable to be rejected.

## **6.0 SUBMISSION OF DOCUMENTS ALONG WITH THE BID**

6.01 Part-I deals with technical and commercial particulars and performance of the bidders. The Bidder shall upload all required documents as prescribed in the tender document , pre-qualifying requirement ,scanned copy of signed tender document , scanned copy of financial instrument except price bid with part I, duly digitally signed, acknowledging his acceptance to the terms and conditions of tender.

6.02 Part-II shall be only the "Price Bid Section". The successful bidders in techno commercial evaluation shall be intimated by the Corporation. Price bid shall be opened of only those successful bidders who qualify in techno commercial evaluation.

## **7.0 VALIDITY OF TENDER:-**

The bid shall remain valid for 90 days which will reckon from the date of opening of technical bid. Bids once opened cannot be withdrawn by the bidder at any stage. Bidders mentioning a shorter validity period than specified are liable to be rejected. In case validity period is not stated it will be presumed that the bid is valid for 90 days without obtaining any confirmation from the bidder.

## **8.01 CANVASSING: -**

No Bidder shall canvas any, Corporation official or the Engineer with respect to his or other tender. Contravention of the condition will invoke in rejection of the tender.

Chief Manger (Elect.)

## FORMS OF TENDER

The Chief Manager (E)  
STC of India Limited  
Jawahar Vyapar Bhawan  
1-Tolstoy Marg  
Janpath  
NEW DELHI – 110 001

Ref. : Supply, Installation, Testing & Commissioning (SITC ) of CCTV surveillance system , X Ray BIS ( Baggage Inspection system ) ,HHMD ( Hand held Metal Detector), Hand Held Walkie-talkie, DFMD(Door Frame metal detector) ,on turnkey basis in Jawahar Vyapar Bhawan,1-Tolstoy Marg, Delhi.

Dear Sir,

I/We hereby tender for the execution of the work specified in the under-written memorandum within the time specified at the rates specified therein on item rate basis and in all respects, in accordance with the specifications, drawings, design and instructions supplied in writing by the STC and with such materials as are provided for and in all respects in accordance with such conditions so far as possible.

General description	Tender for "Supply, Installation, Testing & Commissioning (SITC ) of CCTV surveillance system , X Ray BIS ( Baggage Inspection system ) ,HHMD ( Hand held Metal Detector), Hand Held Walkie-talkie, DFMD(Door Frame metal detector) ,on turnkey basis in Jawahar Vyapar Bhawan, 1 Tolstoy Marg, Delhi
Earnest Money	3,25,000=00, EMD shall be refunded on request after technical bid opening .
Total security deposit	10 % of the awarded contract value.
Period of completion	2 months from the date of issuance of LOI

Performance Bank Guarantee	5 % of the awarded value of the contract , as per tender terms
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1. I/We hereby distinctly and expressly declare and acknowledge that before the submission of my/our tender, I/We have carefully followed the general instructions and read the detailed specifications and schedule of quantities and clearly understand all the conditions of the contract.
2. I/We have seen the location where the said work is to be done and made such investigations of work required in regard to the materials required to be furnished as to enable me/us to complete the work successfully should this tender be accepted in whole or in part.
3. I/We hereby agree to abide by and fulfill all the terms and conditions annexed hereto. To execute, all the works referred to in the tender documents upon the terms and conditions contained or referred to there in and carry out such deviations as may be ordered at the rates quoted in the tender documents.
4. I/We agree that my/our earnest money shall stand forfeited otherwise if I/We fulfill the condition and start the work the said earnest money shall be retained by STC towards security deposit.
5. I/We agree to keep the offer valid for 90 days (3 months) from the date of opening of price bid.

I/We/am/are

Yours faithfully,

(Bidder)

Letter for submission of bid

From:-----

To

The Chief Manager  
Building Project and maintenance Division,  
STC of India Ltd..  
Jawahar Vyapar Bhawan  
1, Tolstoy Marg, New Delhi-110001.

Sir,

1. I have examined the conditions as incorporated in the Tender documents for the Execution of work and having visited and examined the site of said work, I/we the undersigned, offer to execute the said works in conformity with the conditions of tender,
2. Should this tender be accepted I/We undertake to commence the work within seven (7) days of issue of the Letter of intent for the said work and further undertake to perform whole of the work comprised in the contract for a period of 12 months within the period specified under tender documents.
3. I/We agree to abide by this tender for a period of **90 days** from the date of opening of Bid or such extended period as may be mutually agreed as prescribed in Instruction to Bidders and shall remain binding upon us .
4. A sum of Rs. 3,25,000/- (Rs. Three Lakhs Twenty Five thousand only ) towards Earnest money Deposit in the form of Demand Draft/ Pay Order/Banker's Cheque Bearing No. \_\_\_\_\_ Drawn on \_\_\_\_\_ Dated \_\_\_\_\_ in



terms of the Instruction to Bidders enclosed in scanned form on line with Technical Bid and has been physically deposited in STC before the bid opening time.

5. Unless and until an agreement is prepared and executed, this bid together with STC's written acceptance thereof shall constitute a binding contract between us.
6. We understand that STC is not bound to accept the lowest bid and that STC reserve the right to accept or reject any bid, and/or to annul the bidding process and reject all bids, at any time prior to award of contract, without thereby incurring any liability from the affected bidder or bidders nor shall STC have any obligations to inform the affected bidders of the grounds for STC's action.

Name of the representative of the contractor to sign:

(a)-----(b)-----

Or

Name of person having power of attorney to sign the contract **(certified true copy of the Power of attorney should be attached)**

Yours Faithfully,  
Signature of the Bidder

Permanent address -----

Complete details of the dealing person name and address with designation  
-----

Note : The contractor is to fill up the blanks in above form before signing & submitting the bid. This application is made with full understanding that:

1. Bids submitted by bidders will be subject to verification of all information furnished for pre-qualification during the bidding process.
2. STC reserves the right to amend the scope and value of any contracts bid under this work.

**Signature of Authorized representative of the bidder with stamp**

**Letter for Unconditional acceptance of Bid Conditions**

**No.**

**Date:**

The Chief Manager ( E)  
Building Project and Maintenance Division  
The State trading Corporation of India Ltd.  
Jawahar Vyapar Bhawan,  
1-Tolstoy Marg,  
New Delhi-110001.

**Subject: - Unconditional acceptance of Bid Conditions for tender**

Dear Sir,

1. I/We have read and examined and understood all the conditions in the bid documents for the subject work and we hereby unconditionally accept the bid conditions entirely for the said work.
2. I/we hereby submit our bid and undertake to keep it valid for a period of 90 days from the date of opening of bid
3. I/we undertake to execute the above items strictly in accordance with the requirements and particulars /Specifications stipulated in the bid documents.
4. I/we hereby further undertake that during the said period:
  - (A) I/we shall not vary/alter or revoke my /our bid during the validity period of Bid.
  - (B) I/we have quoted for the complete scope of the said work
  - (C ) I/we undertake to abide by the terms and conditions as stipulated in STC bid documents and as amended thereafter before award of work.
  - ( D ) I/We have not enclosed any condition/deviation to conditions of Bid documents in the envelope containing Price Bid.

5. I/we agree that in an event of conditional bid, the bid is liable to be rejected without assigning any reason whatsoever and the Earnest Money deposit is liable to be forfeited.
6. This undertaking is in consideration of STC agreeing to open my bid, considering and evaluating the same for the purpose of award of work in terms of provision of bid documents.

I submit EMD of Rs..... through Bank draft/  
Banker” cheque No. ----- dated ----- issued by -----  
----- (Name of Bank) along with the Technical Bid.

Signature along with seal of the company of the signatory duly authorized to sign the  
Bid on behalf of the Contracto

Name -----

Designation-----

Name of Company-----

Date and Postal address-----

Witness:

Signature\_\_\_\_\_

Date\_\_\_\_\_

Name and address & Telephone No.\_\_\_\_\_

### **PROFORMA – 3**

#### **Performa for submission of past contractual performance/declaration by the bidder**

It is submitted that :-

1. We have not made any misleading or false representation in the forms, statements and attachments in proof of the Pre-Qualification requirements.
2. We do not have records of poor performance such as abandoning the work, not properly completing the contract, inordinate delays in completion, litigation history or financial failures etc.
3. Our business has never been banned/ Blacklisted by any Central/State Govt. department/Public Sector Undertakings or Enterprises of Central /State Govt.
4. We have submitted all the supporting documents and furnished the relevant details as per the prescribed format.
5. The information and documents submitted with the tender by us are correct and we are fully responsible for the correctness of the information and documents submitted by us.
6. We have not submitted fraudulent document/information either in present or past tenders.

Signature of Authorized representative of the tender

Bidder's stamp

## ARTICLES OF AGREEMENT

This agreement made on the \_\_\_\_\_ day of \_\_\_\_\_, Two thousand ..... between "The State Trading Corporation of India Limited" (hereinafter referred to as the Client) and whose registered office is located at Jawahar Vyapar Bhawan, 1-Tolstoy Marg, Janpath, New Delhi –110001 on the one part and M/s. \_\_\_\_\_ (hereinafter referred to as the Contractor) and whose registered office is located at \_\_\_\_\_ -----on the other part, whereas the Client desires certain works to be executed by the contractor viz. "  
\_\_\_\_\_  
" in considerations of the amount of Rs. \_\_\_\_\_ (Rupees \_\_\_\_\_ in words) and subject to such terms and conditions as set out in the tender documents (Tender No. \_\_\_\_\_ dated \_\_\_\_\_ ) which shall form part of the contract.

Whereas the Contractor has agreed to keep STC indemnified at all times against any claims/liabilities/proceedings etc from any third party or otherwise arising out of/or in connection with the tender documents.

Whereas in consideration of the payments to be made by the Client to the Contractor as hereinafter mentioned the contractor hereby agrees with the Client to perform the services in conformity with the provisions of the agreement.

Whereas the Client agrees to pay the contractor in consideration of the performance of the services such amounts as may become payable under the provisions of the agreement at the times and in manner prescribed by the agreement.

NOW THIS AGREEMENT WITNESSED AS UNDER

That the terms and conditions in the tender documents and award letter No. \_\_\_\_\_ dated \_\_\_\_\_ will form part of the agreement and shall be binding on both the parties.

In witness where of the parties have caused this agreement to be executed on the day and year first above written.

Binding Signature of the Contractor

Binding signature of the Client

In the presence of :

Name:

Name:

Designation

Designation

**(Stamp Paper in the name of the Bank Schedule 'B')**

PERFORMANCE BANK GUARANTEE FORMAT

(To be executed by any Nationalized Bank in India having their Branch in the State of End-user Department on stamp paper of Rs.100/-)

Name & Address of the Buyers (End-user Department)

\_\_\_\_\_

1. Against Tender No. \_\_\_\_\_ dated \_\_\_\_\_ and Contract No. \_\_\_\_\_ Dated - \_\_\_\_\_(hereinafter called the Contract entered into between the STC of India Ltd., New Delhi which expression shall, unless repugnant to the context or meaning, thereof include its successors, representatives & assigns for and on behalf of \_\_\_\_\_ (hereinafter called the Buyers/End user Department) and M/s. \_\_\_\_\_(Name and Complete Address) (hereinafter called the Sellers) which expression shall, unless repugnant to the context or meaning, thereof include its successors, representatives & assigns this is to certify that at the request of the Sellers, we \_\_\_\_\_ Bank unconditionally and irrevocably guarantee to pay to the Buyers immediately on first demand, the amount of US \$/Rupees \_\_\_\_\_(@ 10% of contract value) without any protest or demur or reference to the Sellers if the Sellers fail to perform all or any of their obligations under the said contract. The decision of the Buyer/End user \_\_\_\_\_or The STC of India Ltd., New Delhi duly communicated in writing to the bank that the sellers have failed to perform all or any of the obligations under the contract shall not be questioned and be final and conclusive. The said amount of US \$/Rupee \_\_\_\_\_ will accordingly forthwith be paid without any conditions or requirement of our proof whatsoever failing which interest @ 15% p.a. on monthly rest basis shall be payable by the Bank to Buyer.
2. It is fully understood that this guarantee is effective for a period up to \_\_\_\_\_ (completion period 2 Months + 60 days ) and that we \_\_\_\_\_ Bank

undertake not to revoke this guarantee during its currency (up to claim period) without the consent in writing of the Buyers.

3. We \_\_\_\_\_ Bank, further agree that the buyer shall have the fullest liberty, without affecting in any manner or obligations hereunder to vary/extend any of the terms and conditions of the said contract or/extend time of performance by the Sellers from time to time or to postpone for any time or from time to time any of the powers exercisable by the Buyers against the said sellers and/or forebear to enforce any of the terms & conditions relating to the said contract and we, \_\_\_\_\_ Bank shall not be released from its liabilities under this guarantee by reasons of any such exercise, variations or extension being granted to the said sellers or for any forbearance and/or commission on the part of the buyers, or any indulgence by the Buyers, to the said Sellers or by any other matter or thing whatsoever which under the law relating to the sureties would, but for this provision have the effect of so releasing us from our liability under this performance guarantee. We further agree that the validity period of this Performance Bank Guarantee will be extended by us upon receipt of any such request in writing from the Buyer and any charges on account thereof shall be to the account of seller
4. We \_\_\_\_\_ Bank further agree that the guarantee herein contained shall not be affected / discharged by any change in the constitution of the said Sellers/Buyers/Bank.
5. The Guarantee will be governed by Indian Laws and will be subject to the jurisdiction of competent courts in the State of Buyer / End – user India alone.
6. No claim shall be admissible against the Buyer in respect of interest on Performance Guarantee regardless of the time of release.
7. The Bank further agrees that decision of the Buyer as to the failure on the part of - \_\_\_\_\_ to fulfill their obligations as aforesaid /or as to the amount payable by the bank to the Buyer shall be final, conclusive & binding on the Bank.



8. This Guarantee will remain in force up to \_\_\_\_\_(completion period 2 Months + 60 days) and any demand in respect thereof should reach Bank not later than 10 (Ten) working days (claim period) from the expiry of above validity date.

9. Notwithstanding anything entered hereto Banks liability under this Performance Bank Guarantee shall not exceed \_\_\_\_\_(in words. Bank is liable to pay the guaranteed amount if Buyer same upon in written claim/demand on of before the expiry date.

FOR \_\_\_\_\_ BANK

ACCEPTED

Witness:-

## **GENERAL CONDITONS OF CONTRACT- SECTION B**

### **1.0 CONTRACT DOCUMENT**

**1.1** The terms Contract Document means the Notice Inviting Tender, Tender Form, Instructions to Tenders, Special Conditions, General Conditions of Contract, Specifications, Price Schedule of Quantities, Scope of work, scope of supply and Drawings and Articles of Agreement and all other items mentioned in the Index page.

### **2.0 COMPETENCY:**

This tender enquiry is floated for PSUs only. The bid has to be signed by the person authenticated by the Managing Director of the PSU concerned. The bid document should be signed by the authenticated person on all pages with seal of the organization. The entire tender document would form part of the contract.

### **3) INSPECTION OF SITE**

Any site information given in this document is for guidance only. The Bidder is advised to visit and examine the Site of works and its surroundings at his/their cost and obtain at his/their own responsibility, any information that may consider necessary for preparing the Bid and entering into a Contract with the Client, including availability of electricity, water and drainage, where applicable. The contractor is free to raise any clarification /doubts regarding scope of work/ scope of supply etc . STC shall not be liable for such costs, regardless the outcome of the selection process.

### **4) ENTRIES**

All the entries in the tender documents must be in English. They must be hand written in ink only. Any tender in whom there is over writing or marks of erasure is liable to be rejected. Tender containing any alterations/cuttings/marks of erasers etc. even if accompanied by signatures shall be liable to be rejected on such grounds. Price Bid to be filled up in figure and words for rate and amount of each item. The mode of bid submission is on-line only

### **5) ADJUSTMENTS**

All compensation or other sum of money payable by the Contractor under the terms of the contract may be deducted from or adjusted against his security deposit,

against any sum which may be due or become due to the Contractor by STC on any account whatsoever. Bidder who proposed any alteration in the work specified in the said form of invitation to tender or in the time allowed for carrying out the work or which contains any other conditions of any sort shall be liable to rejection.

#### **6) REJECTION OF TENDER**

The Contractor shall fill in the rates tendered in figures as well as words. The amount of each item should be worked out and the requisite total given. The bidders who do not fulfill these requirements, their tender is liable to be summarily rejected.

No alteration made by the bidder in the notice of tender, instructions to the Contractors, in the contract form, in the conditions of contract, in the drawings, in specifications or in quantities accompanying the same shall be recognized, and if any such alterations are made or any special conditions are attached, the tender is liable to be rejected.

STC reserves the right to accept or reject any bid and/or to annul the bidding process and reject all bids at any time prior to award of contract ,without thereby incurring any liability from the affected bidder or bidders nor shall STC have any obligations to inform the affected bidder or bidders of the grounds for STC action.

#### **7) CHECK RATES & FIGURES**

If on check and verification differences are found between the rates given by the contractor in words and figures or in the amounts worked out by him, the following procedure shall be followed:

- 7.1 Where there is a difference between the rates in figures and words, the rate which correspond to the amount worked out by the contractor shall be taken as correct.
- 7.2 Where amount of the item is not worked out by the Contractor or it does not correspond the rate written either in figures or in words then the rates quoted by the contractor in words shall be taken as correct and amount shall be worked out accordingly.
- 7.3 Where rates quoted by the contractor in figures and words tally but the amount is not worked out correctly. The rates quoted by the contractor shall be taken as correct and not the amount.

#### **8) NON RECOGNITION OF UNWARRANTED CLAIMS**

The contractor shall not in any case after acceptance of a contract rate, be paid any; extra charge for lead involved in transport of materials to site, Installation and hire of T & P sheds.

For materials, in case the sources of materials available. All taxes including octroi toll or sales tax or any other taxes etc. shall be payable by the contractor and no claim whatsoever in this respect shall be entertained.

**9) CANVASSING**

Any canvassing in any form in connection with the tenders is strictly prohibited and the tenders submitted by the contractors who resort to canvassing shall be liable to rejection.

**10) AUTHORIZED OFFICER**

If the headquarters of the successful bidder are elsewhere other than in Delhi, he shall have to nominate /depute a duly authorized officer in Delhi from the date of commencement of the work until the work is completed. This officer will coordinate with STC for day today works and will primarily carry out the works under his supervision .Such officer(s) will be authorized to act on behalf of the successful bidder.

**11) DEPLOYMENT OF TECHNICAL & OTHER STAFF**

The contractor shall deploy the qualified personnel such as project Engineer having experience in related work for the execution of the work .In case, the contractor fails to deploy proper technical staff as aforesaid, he shall be liable to pay to STC of India Limited at the rate of Rs.5000/- per week (Five thousand) for Project Engineer.

**12) REPLACEMENT /RECTIFICATION IN CONTRACTOR ADDRESS**

Any notice under the Contract shall be deemed to have been served on the successful bidder if served upon his authorized officer or sent by registered letter at his known address. Contractor's authorized officer shall not be changed and shall not leave during the duration of the contract, unless prior consent of the STC . If the STC require the contractor to carry out any replacement/rectification under terms of the contract either during the currency of the contract or after the works are completed, but before the expiry of the Defect Liability Period, the contractor or his duly authorized agent shall carry out the same.

**13) SUBLETTING**

No part of the contract shall be sublet without the written permission of the Engineer-In-Charge STC.

**14) CO-ORDINATION**

The successful bidder shall co-ordinate and co-operate with all other agencies appointed by the STC so that the work shall proceed smoothly with least possible delay and to the satisfaction of the STC. Work shall be carried out in such a manner that the work of other agencies operating at the site is not hampered due to any action of the contractor. Proper co-ordination with other agencies will be contractor's responsibility. In case of any dispute, the decision of STC shall be final and binding on the contractor.

**15) ACKNOWLEDGEMENT OF ACCEPTANCE**

The bidder whose tender is accepted will acknowledge the consent of the order within a week's time from the date of receipt of such a written order, intimate to the Engineer-in-charge of his acknowledgement. Bidder's failure to furnish such acceptance within the stipulated time shall give right to the Engineer-in-charge to revoke the acceptance of tender without any further notice to bidder.

**16) SIGNING OF CONTRACT DOCUMENTS**

After acceptance of the tender, the bidder shall sign the necessary contract documents within 15 days of the above intimation. In case of delay, the earnest money may be forfeited and the tender may be cancelled at the discretion of the STC.

**17. SAFETY CODE, LABOUR CAMPS SANITARY ARRANGEMENTS**

The contractor shall follow the Safety Code and Model Rules for the Protection of health and sanitary arrangement for workers as prescribed by the CPWD as regard to safety code and first aid facilities. Contractor shall be fully responsible for safety of his workers and in case of any accident/mishap the entire responsibility shall be on the contractor.

Deterrent penal and legal action shall be taken in the event of any failure on the part of the contractor to discharge the safety obligations as determined by the STC.

**18. PAYMENT OF WAGES BY THE CONTRACTOR**

The contractor shall directly pay to labour employed by him and shall be solely responsible for following all Government rules and regulations applicable for employment.

## **19. REMOVAL OF PERSON**

The Engineer-in-charge may require the contractor to remove from the site of the work any person or persons in the contractor's employment who have been found to be incompetent or due to misconduct and the contractor shall forthwith comply with such requirement/instructions.

## **20. ARBITRATION**

In the event of any dispute or difference relating to the interpretation and application of the provisions of the tender, such disputes or differences shall be referred by either party for arbitration to the sole arbitrator in the department of public enterprises to be nominated by the Secretary to the Government of India in charge of the department of public enterprises. The arbitration and conciliation act 1996 shall not be applicable to arbitration under this clause. The award of the arbitrator shall be binding upon the parties to the dispute , provided, however, any party aggrieved by such award may make a further reference for setting aside or revision of the award to the Law secretary, department of legal affairs, Ministry of Law and justice, Government of India . Upon such reference of dispute shall be decided by the Law secretary or the special secretary /Additional secretary, when so authorized by Law secretary whose decision shall bind the parties finally and conclusively. The parties to the dispute will share equally the cost of arbitration as intimated by the arbitrator.

## **21.0 LIEN IN RESPECT OF CLAIM IN OTHER CONTRACTS**

Any sum of money due and payable to the contractor (including the security deposit refundable to him) under the contract may be withheld or retained by way of lien by the STC in respect of payment of a sum of money arising out of or under the same or any other contract made by the contractor with the STC.

It is an agreed term of the contract that the sum of money so withheld or retained under this clause by the STC will be kept withheld or retained as such by the STC or till his claim arising out of the same contract or any other contract is either mutually settled or determined by the arbitration clause or by the competent court, as the case may be and that the contractor shall have no claim for interest or damages whatsoever on this account or any other ground in respect of any sum of money withheld or retained under this clause and duly notified as such to the contractor.

#### **22.00 The Indemnity Clause**

The Contractor shall at all times indemnify and keep STC indemnified against any claims /liabilities/proceedings etc. from any third party in respect of any damages or compensation payable in consequences of any accident or injury sustained or suffered by its employees/workmen or agents or by any other third party resulting from or by any action, omission or operation conducted by or on behalf of the Contractor.

The Contractor shall at all times, indemnify and keep STC indemnified against any and all claims of the Employees, Workman, agent(s), sub-contractor if permitted by the Engineer in charge, employed engaged or otherwise working for the Contractor, in respect of wages, salaries, remuneration, compensation or the like.

All claims regarding indemnity shall survive the termination or expiry of the Contract and shall be recoverable from Performance Bank Guarantee (PBG) in addition to any other means.

#### **23) WATER & POWER FOR INSTALLATION**

STC shall provide power & water at one point for the proper execution of the work free of cost under normal circumstances. In case STC is not in a position to supply the water and/or power, the Contractor will make his own arrangement so that the work does not suffer. However, no claim of the contractor whatsoever shall be entertained by STC on this account.

#### **24 ) COMPLIANCE OF LABOUR LAWS**

The contractor shall abide by the Contract Labour, (Regulation and Abolition) Act, 1970, and Contract Labour (Abolition and Regulation) Central Rules 1971. The Contractor shall comply with the provisions of Payment of Wages Act, 1936. Minimum Wages Act, 1948, Employees Liability Act, 1938, Workmen's Compensation Act, 1923. Industrial

Disputes Act and other applicable regulations and other labour laws applicable to Contract Labour as mentioned below:

1. Industrial Disputes Act;
2. Industrial Establishment (Standing Orders) Act,
3. Trade Unions Act;
4. The Factory Act;
5. Employees Provident Fund & Miscellaneous Provision Act
6. Employees State Insurance Act;
7. Workmen's Compensation Act'
8. Payment of Gratuity Act;
9. Minimum Wages Act;
10. Payment of Wages Act;
11. Equal Remuneration Act,
12. Payment of Bonus Act,
13. National/Weekly Holidays Act,
14. Inter-state Migrant Workmen (Regulation of Employment and of service conditions) Act.
15. The contractor whose tender is accepted and who employs or employed 20 or more workers on any day of the preceding 12 months in various contracts, that he may have in other departments/establishments of STC shall obtain a valid License under the Contract Labour (R&A) Act 1970 and the Contract Labour (Regulation and Abolition) (Central) Rules 1971 before the commencement of the work and continue to have a valid license until the completion of the work.  
Any failure to fulfill this requirement shall attract the penal provisions of the Act, which includes imprisonment for a term which may extent to three months or with fine or both.
16. No Labour below the age of 18 shall be employed on the work.
17. The contractor shall pay to the labour employed by him wages not less than the minimum wages in accordance with the notification for minimum wages issued by Govt. of NCT of Delhi (Labour Department) or Central Govt., whichever is higher from time to time



18. The contractor shall issue an employment Card to each worker within three days of the employment of the worker. This card shall be maintained up to date.

## **25 .FORCE MAJEURE**

For the purpose of this Contract, “Force Majeure” means an event which is beyond the reasonable control of STC or the Contractor, is not reasonably foreseeable, is unavoidable and is not brought about by or at the instance of the party claiming to be affected by such events and which caused the non-performance or delay in performance, and which makes a party’s performance of its obligations hereunder impossible or so impractical as reasonably to be considered impossible in the circumstances and includes, but is not limited to, war, riots, civil disorder, earthquake, fire, explosion, storm, flood or other extreme adverse weather conditions ( i’e Act of God) , strikes, lockouts or other industrial action (except where such strikes, lockouts or other industrial action are within the power of the party invoking Force Majeure to prevent), confiscation or any other action by Government agencies.

The party which is unable to fulfil its obligations under the present contract must within 24 hours from the day of occurrence of any of the causes mentioned in this clause shall inform the other party of the existence of the circumstances referred to above, which are responsible for causing delays in performance of the contract.

The party affected by an event of Force Majeure shall continue to perform its obligations under the Contract as far as is reasonably practical, and shall take all reasonable measures to minimise the consequences of any event of Force Majeure.

The failure of either party to fulfil any of its obligations under this contract shall not be considered to be a breach of, or default under, the Contract insofar as such inability arises from an event of Force Majeure, provided that the party affected by such an event has taken all reasonable precautions, due care and reasonable alternative measures, all with the objectives of carrying out the terms and conditions of the Contract.

Notwithstanding the above in case of Strike /Labour dispute that prolongs beyond a period of 48 hours, the Contractor is required to inform STC about the same, on account of which STC reserves the right to get the work done from any other agency at the risk and cost of the Contractor.

## 26. TERMINATION

Notwithstanding anything elsewhere provided herein and in addition to any other right or remedy of STC under the contract or otherwise, including right of STC for compensation for delay, the Engineer-in-charge may, without prejudice to his right against contractor in respect of any delay, bad workmanship or otherwise or to any claims for damage in respect of any breach of the contract and without prejudice to any rights or remedies under any of the provisions of this contract or otherwise and whether the date for completion has or has not elapsed by intimation in writing, absolutely determine the contract.

Default or failure by the contractor in any of the under mentioned cases, including but not limited to the following shall be the basis of taking action under this clause of the contract:

- 1) Failure to provide at the job site, sufficient labour, material, equipment, machinery, and/or facilities required for the proper and/or due execution of the work or any part thereof;
- 2) Failure to execute the works or any of them in accordance with the contract
- 3) Disobedience of any order or instruction of the Site Engineer and/or Engineer-in-charge.
- 4) Negligence in carrying out the work or carrying out of work found to be unsatisfactory by the Engineer-in-charge.
- 5) Abandonment of the works or any part thereof;
- 6) Failure to execute the contract in terms of the form of the Contract forming part of the Tender Documents within 10(ten days) of notice in this behalf from STC.
- 7) If the contractor is incapable of carrying out the work;
- 8) If the contractor misconduct in any manner;
- 9) If there is any change in the constitution of the contractor (if a contractor) or in the circumstances or organization of the contractor, which is detrimental to the interests of STC.
- 10) Dissolution of the contractor (if a contractor or commencement of liquidation) or winding up (whether voluntary or compulsory) of the contractor (if a company) or appointment of a receiver or Manager of any of the contractor's assets and/or

insolvency of the contractor (if a sole proprietorship) or of any partner of the contractor (if a contractor);

- 11) Delay in execution of work, which in opinion of Engineer-in-charge shall delay the completion of work beyond the stipulated date of completion;
- 12) Distress, execution, or other legal process being levied on or upon any of the contractors goods and/or assets;
- 13) Death of Contactor (if an individual);
- 14) If the contractor or any person employed by him shall make or offer for any purpose connected with the contract any gift, gratuity, royalty, commission, gratification or other inducement (whether money or in any other form) to any employee or agent to STC.
- 15) If the contractor shall assign or attempt to assign his interest or any part thereof in the contract.
- 16) In case of violation of terms and conditions of the tender, violation of any stator regulations, local laws etc. STC shall reserve the right to terminate the contract.  
The decision of the General Manager (Admn.), STC as to whether any of the events/contingencies mentioned in aforesaid clauses entitling STC to terminate the contract has occurred shall be final and binding upon the contractor and shall be non-obligation. The reason for the termination stated in the notice of termination shall be final and binding upon the contractor and shall be non-arbitral. The jobs left however by the contractor shall be got done at his risk and cost through the other agencies and the contract shall be determined accordingly.
- 17) If the Bidder deliberately gives wrong information in his tender, is liable to rejection at any stage. In such cases the deposited dues with STC shall be forfeited by the Corporation

## **27) CLEARANCE OF SITE**

The contractor shall have to remove all malba and other unwanted material from site of work before handing over the installation to the STC. The work shall not be treated as complete in all respects unless these requirements are fulfilled by Contractor. In the event of contractor failing to do so, the STC shall have right to get the site cleared at Contractor's cost.

## **28.) WORKING SCHEDULE**

Normally the work will be carried out during working hours however for early completion of the work , the contractor may request STC for allowing extra hours during day, night, Saturday or Sunday including holidays.

## **FINANCIAL TERMS AND OTHER TERMS**

### **1.0 CONTRACT SUM**

**1.1** The Term Contract Sum” means: - This is turnkey basis contract. The cost of the work arrived at total cost of SITC ( Supply , installation, testing commissioning ) of CCTV surveillance system , X Ray BIS( Baggage Inspection system ) ,HHMD ( Hand held Metal Detector), Hand Held Walkie-talkie, DFMD(Door Frame metal detector) , on turnkey basis in Jawahar Vyapar Bhawan,1-Tolstoy Marg, Delhi. The decision of L1 in this tender shall be taken including cost of AMC. The AMC contract shall be optional and separate after expiry of defect liability period.

**1.2** Contractor shall strictly conform to the specifications, schedule of rates, general and special terms and conditions if any, and any other matter contained in the tender documents issued by the STC.

**1.3** The value of estimated cost, Earnest Money and Performance Guarantee, Security Deposit are as follows:

A) Earnest Money	:	Rs 3,25,000
C) Performance Bank Guarantee	:	5 % of awarded value as per format
D) Security Deposit	:	As per details below

### **2.0 SECURITY DEPOSIT (S.D.)**

**2.01** The successful bidder will have to deposit a security amount @ 10% of the contract value through DD/ Bankers cheque, in favour of State Trading Corporation of India Ltd., Payable at Delhi within 15 days from the letter of intent or work order issued from STC. Amount of EMD already deposited shall not be adjusted in this Security deposit amount. EMD will be refunded on request.

**2.02** Unless otherwise specifically required to be retained / forfeited by STC in part or full, the security deposit shall be refundable on the request of the contractor after satisfactorily completion of the free warranty period (Defect liability period) of 12 months to the satisfaction of the STC.

**2.03** If the contractor fails and neglects to observe or perform any of this obligation the contract it will be lawful for the STC to forfeit either in whole or in part, at its absolute discretion, the security deposit furnished by the contractor.

**2.04** No interest shall be payable on such deposit.

### **3.0 PERFORMANCE BANK GUARANTEE (PBG )**

The bidder shall guarantee among other things, the following:-

- (a) Quality ,Strength and performance of the material used.
- (b) Safe electrical and mechanical stress on all parts used under all specified condition of operation.
- (c) Satisfactory performance during the work execution period

The bidder shall submit an irrevocable performance guarantee amount which will be 5 % of awarded value in addition to security deposit against the proper performance of the equipment/ material. The performance guarantee amount will have to be deposited within 15 days of issue of detailed award letter in the form of DD/ Banker' cheque. The performance bank guarantee amount will be valid up to the completion date of project plus 60 days beyond.

### **4.0 WORK OPEN TO INSPECTION**

All work under or in course of execution or being executed in pursuance of the contract shall at all times be open to inspection and supervision of the Engineer-in-charge and his authorized subordinates, and the contractor shall at all times during the usual working hours, and at all other times at which reasonable notice of the intention of the Engineer-in-charge or his subordinate to visit the works shall have been given to the contractor, either himself be present to receive order and instructions, or have a responsible agent duly accredited in writing, present for that purpose. Order given to the contractor's agent shall be considered to have the same force as if the same had been given to the contractor himself.

### **5) REJECTION OF DEFECTIVE MATERIAL**

- 5.1 If on test ,any portion of the "Supply, Installation, Testing & Commissioning (SITC ) of CCTV surveillance system , X Ray BIS( Baggage Inspection system ) ,HHMD ( Hand held Metal Detector), Hand Held Walkie-talkie, DFMD(Door Frame metal detector) , or their accessories are found to be defective or not fulfilling the intent or the meaning of the specifications, the same shall be replaced with a new one in case of mandatory supplies ( as per scope of supply ) OR be repaired or rectified in case of any other accessories either during or after the completion of the work but before

the expiry of defect liability period to the entire satisfaction of STC , at no cost to STC.

- 5.2 In case the contractor fail to remove the defects, within 5 days, STC reserves the right to take necessary remedial measures through other agencies and all expenses thus incurred would be recovered from the contractor.

#### **6) APPROVAL OF MATERIALS**

All materials articles and workmanship shall be subject to the approval of the Engineer-in-charge.

#### **7) CONTRACTOR TO DEPLOY LABOUR AND MATERIAL**

The contractor shall deploy at his own cost all labor and all consumable material tools and plants, appliances, implements, ladders, tackle, scaffolding etc. requisite for the proper execution of the work and whether included in the specifications or other documents forming part of the contract or referred to in the conditions or not, or which may be necessary for the purpose of entirely satisfying the engineer-in-charge.

The work is to be carried out as per the specifications in the tender and relevant standards. The material should be got approved before start of work.

All the equipment/material used shall be one of the stipulated makes in order of preference as per approved list of material.

Agency will be responsible to test & commission the entire installation .The work shall be executed without any loss/damage to the STC's properties.

#### **8) CERTIFICATION OF COMPLETION**

The work shall not be considered as completed until the Engineer-in-charge has certified in writing that the works have been completed and the guarantee period shall commence from the date of such certificate after handing taken over by STC.

Partial completion will not be issued.

#### **9). TIME AND EXTENSION FOR DELAY**

If in the opinion of the Engineer-in-charge the works is delayed by:

- a) Force majeure
- b) Reasons of civil commotion, location combination of workers on strike or lock-out affecting any of the building trades;

- c) In consequence of the contractor for not having received in due time necessary instructions from the Engineer-in-charge for which he shall have specifically applied in writing.
- d) The Contractor shall immediately give notice thereof in writing to the Engineer-in-charge but shall nevertheless use constantly his best endeavors to prevent or make good the delay and shall do all that may be reasonably required to the satisfaction of the Engineer-in-charge to proceed with the works  
Request for rescheduling of date of completion and extension of time, to be eligible for consideration, shall be made by the contractor in writing immediately after the happenings of the event causing delay. The contractor may also, if practicable, indicate in such a request the period for which extension is desired.
- e) In such case, the Engineer-in-charge may give a fair and reasonable extension of time and reschedule the completion date. Such extension shall be communicated to the contractor by the Engineer-in-charge in writing within 10 days of receipt of such a request.
- f) Time extension shall be sole prerogative of STC and no claim of contractor shall be entertained if time extension is not granted.

#### **10). COMPENSATION FOR DELAY**

If the contractor fails to maintain the required progress as mentioned in appendix or to complete the work and clear the site on or before the contract or extended date of completion, he shall, without prejudice to any other right or remedy available under the law to the STC on account of such breach, pay as 2% per week up to maximum @ 10 % of the delayed part of work as compensation or penalty.

#### **11.0 PAYMENT**

- (a) No advance payments shall be made to the contractor. Payment shall be released on pro rata basis after supply, installation testing, commissioning of the equipment. Final payment shall be made only on the basis of detailed measurements on actual basis considering completion of the project. Payment to the contractor shall be made through NEFT mode only for which Bank charge necessary shall be borne by the contractor.



- (b) Final payment shall be released as per recommendation of Engineer in charge / competent authority and deductions of statutory dues and as per the stauts of works carried out.

## **12. SUBMISSION OF BILL:-**

A bill shall be submitted by the contractor each month on or before the date fixed by the Engineer-in-charge for all the works executed in the previous months, and the Engineer-in-charge shall take or cause to be taken the requisite measurement for the purpose of having the same verified and the claim as far as admissible to be adjusted.

## **13) MEASUREMENTS**

Measurements shall be in metric system and running account bills as per schedule of rates shall be prepared and submitted for the work done based on joint measurements

### **14.0 RATES**

**14.01** The tender rates shall include the cost of materials, labour, installation, testing, commissioning, loading, unloading, shifting, supervision, tools & tackles, transport, all taxes, excise duty and other levy, contingencies, breakage, wastage, sundries, scaffolding etc. and maintenance during defect liability period for one year for complete installations of CCTV surveillance system , X Ray BIS( Baggage Inspection system ) ,HHMD ( Hand held Metal Detector), Hand Held Walkie talkie, DFMD(Door Frame metal detector) ,, in Jawahar Vyapar Bhawan,1-Tolstoy Marg, Delhi, Whether specifically mentioned or not. The coat of AMC ( annual maintenance cost) is also to be mentioned .

**14.02** If the rates of any item(s) is/are left lank by the bidder, the same shall be treated as zero and it will be presumed the bidder has already accounted the rates in other items against the blank items and the contractor shall have to carry out the that item work within stipulated cost.

### **14.03 TAXES & DUTIES**

The contractor shall also include in his price all taxes, duties or other levies (viz. excise duty, custom duty, VAT, works contract tax, octroi, insurance etc.) which are

legally levy-able works. The services tax shall be payable extra by STC as per extant rules. The prices are contractor and fixed during the currency of contract.

However, in case of any variation in Tax or levy is imposed by statutes, after the last date of submission of tender, the contractor thereupon shall have to pay necessarily pays such revised taxes levies The same shall not be reimbursed by STC except service tax. However variation in service tax shall be paid as per extant rules by STC.

## **15.0 DEVIATION/VARIATION EXTENT/EXTRA ITEMS/SUBSTITUTED ITEMS AND PRICING:**

### **15.01 GENERAL**

The Engineer-in-charge shall have power (i) to make alteration in, omissions from, additions to, or substitutions for the original specifications, drawings, designs and instructions that may appear to him to be necessary or advisable during the progress of the work, and (ii) to omit a part of the works in case of non-availability of a portion of the site or for any other reasons provided the same are recorded in writing and proper approval is obtained thereof and the contractor shall be bound to carry out the works in accordance with any instructions given to him in writing signed by the Engineer-in-charge and such alterations, omissions, additions or substitutions shall form part of the contract as if originally provided therein and any altered, additional or substituted work which the contractor may be directed to do in the manner specified above as part of the works, shall be carried out by the contractor on the same condition in all respects including price on which he agreed to do the main work.

### **15.02 DEVIATION IN QUANTITY**

STC reserve the right to order the contractor to SITC of the some equipment mentioned in contract up to a value not exceeding  $\pm 15\%$  of total contract value, on the same rates, terms and conditions. The order for enhancing the quantity will be placed latest within 1 month from the date of completion of the project.

## **16) DRAWINGS, MAINTENANCE MANUALS ETC.**

On the award of work, the contractor shall immediately proceed with the preparation of General Arrangement drawings, single line diagrams, schematic for the project,

detailing the equipment that are to be installed and the ancillary works that are to be carried out. Four sets of all such working drawings shall be submitted to the Engineer in charge, for his approval to ensure that the works will be carried out in accordance with the specifications and drawings, including such changes as may have been mutually agreed upon. All the drawings shall be received by the STC for his approval, within 10 days of the award of work. The approval of the drawings by the STC representative shall in no way relieve the contractor from his obligations to provide a complete and satisfactory (SITC) of Supply, Installation, Testing & Commissioning (SITC) of CCTV surveillance system, X Ray BIS( Baggage Inspection system), HHMD ( Hand held Metal Detector), Hand Held Walkie talkie, DFMD(Door Frame metal detector) ,, in Jawahar Vyapar Bhawan,1-Tolstoy Marg, Delhi as per intent and purposes as laid down in the specifications, any omissions and/or errors shall be made good or rectified whether or not the drawings are approved prior to the completion of the work the contractor shall furnish to STC, Four sets of a comprehensive manual, describing all components, furnishing list of installation for the operation and maintenance of the (SITC) of complete system. Successful contractor after receipt of order must furnish detailed bar chart showing various activities with respect to time and he must organize co-ordination meeting at site to review the progress of his work.

#### **17) AS BUILT DRAWINGS**

On completion of the work in all respects, the contractor shall supply 4 sets of as built drawings indicating the completed work with detailed specifications used for various equipment as to the satisfaction and verification of the Engineer in charge. Final bill will not be paid for non-submission of the same.

#### **18) TEST & INSPECTION**

- (a) Before the dispatch of the material to STC, the contractor shall inform STC that the material is ready for inspection. The contractor shall arrange the inspection at the venue as indicated. After the detailed checking/ testing in appropriate laboratory of the material and consequent approval of the testing Engineer as per the standard test procedures laid down in the IS / relevant standards thereafter as per instructions of STC Engineer. The inspecting officer shall inspect the material as per the technical

specification of the tender document. Partial inspection of the material will not be entertained. Once the material is inspected and cleared for dispatch by inspecting engineer, the contractor shall arrange to deliver the same material at site in intact condition. The poor quality of material shall be rejected. However such tests at any laboratory during any stage of contract period does not absolve the responsibility of the contractor for proper functioning of the material during execution and afterwards also.

- (b) All the cost including lodging, boarding of inspecting engineer will be borne by the supplier/contractor. The entire test either on the field or outside concerning the execution of the work and supply of materials by the contractor shall be carried out by the contractor at his own cost.
- (c) The work is subject to inspection at all times by the STC and or its authorized representative. The contractor shall carry out all instructions given during inspection and shall ensure that the work is being carried out according to the technical specifications of this tender. The technical documents will be furnished to him during the performance of the work and the relevant codes of practice.
- (d) The contractor shall provide for purpose of inspection access all tools and gazettes required for inspection.
- (e) All results of inspection and tests will be recorded in the inspection reports. Performance of which will be approved by the STC. These reports shall form part of the completion documents.
- (f) Any work not conforming to the execution of drawings, specifications or codes shall be rejected forthwith and the contractor shall carry out the rectification at his own cost.
- (g) STC reserve the right to waive off such inspections and may accept the test reports also if available from genuine laboratory / established labs for the tests which are not feasible to carry out.

## **19) GUARANTEE**

The contractor shall guarantee that all the equipment, materials and components supplied, fabricated, designed and installed by him shall be free from defects due to

faulty design, material or workmanship, that the Supply, Installation, Testing & Commissioning (SITC ) of CCTV surveillance system , X Ray BIS( Baggage Inspection system ) ,HHMD ( Hand held Metal Detector), Hand Held Walkie talkie, DFMD(Door Frame metal detector) ,, in Jawahar Vyapar Bhawan,1-Tolstoy Marg, Delhi shall perform satisfactorily specifically the successful performance of the system.

The period of the guarantee shall be (12) twelve months from the date of handing over the complete work. During this period any or all components /equipment pertaining to cameras found to be defective shall be replaced with a new one and with regard to other defects the same shall be repaired/rectified and any shortcomings found in the system as specified shall be removed at no extra cost. The contractor shall provide the necessary personnel and tools for fulfilling the above guarantee.

If the above is not carried out within a reasonable time, then STC may arrange to do the same at the contractor's risk and cost, without prejudice to any other rights.

## **20) PAINTING**

All equipment/ancillary items, supports, clamps, saddles etc. will be painted in approved manner, using colors scheme as approved by the STC.

## **21) SAFE CUSTODY AND STORAGE**

Safe custody of all machinery and equipment supplied by the contractor shall be his own responsibility till the final taking over by the employer. The contractor should, therefore, employ sufficient staff for watch and ward at his own expenses.STC may, however, allow the contractor to use the temporary storage, of his equipment if such spaces are ready and available.

## **22) INTERPRETATION**

In interpretation of specifications, the following orders of decreasing importance shall be followed:

1. Schedule of quantities
2. Technical specifications
3. Schedule of Fiscal aspects
4. Special conditions of contracts

5. General conditions of contract

Matters are covered by the specifications given in this contract, as a whole shall be covered by relevant and latest Indian Standard codes/CPWD code in case of any disputes. If such codes on a particular subject have not been framed or crossed with the specifications of this tender, the decision of the STC shall be final and binding.

**23) Comprehensive Operation & Maintenance during Defects Liability Period**

**A) COMPLAINTS**

The contractor shall receive calls for any and all problems experienced in the operation of the system installed under this contract, attend to these within 4-5 hours of receiving the complaints and shall take steps to immediately correct any deficiencies that may exist.

**B) REPAIRS/REPLACEMENT**

In case any defect is observed pertaining to cameras or other equipment /component, the same shall necessarily be required to be replaced with a new one whereas in cases of any other defect, immediate service, repairs and maintenance shall be carried out within the defect liability period. The period for replacement of defective part is 5 days else STC may take the works through any other agency at the risk and cost of the contractor.

The replacement parts and labour shall be supplied promptly free of charge to STC.

**C ) Un-Attending Defects**

If the contractor does not repair the defect as indicated in clause B within the stipulated time asked by the Engineer in charge, STC shall be free to get the repairs done at the risk and cost of the Contractor, through the dues pending with STC or any other means possible.

**D) Operation of system**

**The operation of the complete system during the first four months of defect liability period shall be carried out by contractor through their trained man**

**power, who will train STC personnel during this period.** All the statutory liabilities like payment of minimum wages, PF, ESI etc. shall be borne by the contractor. There must be an at least one Engineer for supervision and coordination and sufficient no. of trained man power for assistance. The contractor shall be bounded by the terms and condition of this contract mentioned in this document .

- ( E) **Comprehensive Annual maintenance :-** The firm has to offer CAMC for a period of one year which will start after the expiry of defect liability period of 12 months . STC reserve the right to award AMC. The terms and conditions of AMC are described separately.

#### **24) SCAFFOLDINGS**

The contractor shall allow the usage of the scaffoldings etc. for the inspections and also to the other agencies employed by the STC for execution of other works in a proper manner. No charge shall be made by the contractor to other agencies for the same.

- 25) The tendered rates shall be inclusive of all necessary items required to complete the work whether mentioned or not.
- 26) The equipment and materials to be supplied shall confirm minimum to the technical details of the material attached with the tender.

- 27) **Certificate of inspection –** the Contractor shall obtain and deliver to the STC, all the certificates of inspection and approval by the local statutory authorities concerned (if required), at site before putting the system into operation. The inspection fee shall be paid by the contractor. License fee will be paid by STC.

#### **28) DEFECT LIABILITY PERIOD**

The contractor shall guarantee the installation for a period of 12 months against defective materials and workmanship from the date of taking over by the STC and shall rectify or replace the defective material or workmanship without any extra cost to the STC as provided under the terms of the contract /Tender document without any delay. If the contractor fails to attend the defects within the period as asked by STC, then the STC has right to get it done at the risk and cost of contractor without giving any further notice. Effective date of completion of work shall be considered after handing over of the entire installation of STC even if, the equipment are

installed and put into use in phases accordingly the defect liability period shall start only from the date of completion and taking over of the entire installation by STC.

- 29) All Internal & External Electrical/Mechanical/Civil works etc., for proper installation of all the equipment is under contractor's scope** and it should be executed as per CPWD specifications stipulated and/or general specifications for works of and to the entire satisfaction of the Engineer-in-charge by the contractor without any extra cost to STC.

(Chief Manger Elect.)



### SCHEDULE OF FISCAL ASPECT

1	Earnest money ( E.M.D.) to be deposited	Rs. 3,25,000=00
2)	Time of completion	2 months from the date of issue of LOI
3)	Date of commencement	From the date of issue of LOI
4)	Compensation for delay (Liquidated damages)	2% per week for the delayed section, subject to max. of 10% of contract value
5)	Security Deposit	10 % of the value of work done within 15 days from L.O.I.
6)	Performance Bank Guarantee	5% value of awarded value within 15 days from date of L.O.I.
7)	Release of Security deposit	After satisfactory expiry of Defect Liability Period of 12 months
8)	Defect Liability Period	12 months from the date of completion and handing over.
9)	Terms of payment	The payment shall be made <b>on pro rata</b> basis after successful supply, erection, testing, commissioning of the CCTV surveillance system , X Ray BIS( Baggage Inspection system ) ,HHMD ( Hand held Metal Detector), Hand Held Walkie talkie, DFMD(Door Frame metal detector).

### **Scope of Supply and work**

1. The contractor is required to complete the work of Supply, Installation, Testing & Commissioning (SITC ) of CCTV surveillance system , X Ray BIS ( Baggage Inspection system ) ,HHMD ( Hand held Metal Detector), Hand Held Walkie-talkie, DFMD (Door Frame metal detector) ,on turnkey basis, in Jawahar Vyapar Bhawan,1-Tolstoy Marg, Delhi
2. The contractor is required to supply the items as detailed below. However it is to be noted that STC reserve the right to alter the quantum of work by  $\pm 15\%$  depending upon the site requirement.
3. Manufacturing Authorization Form from CCTV OEM is must for this particular Tender.
4. Proof of concept/Demo may be asked during technical evaluation and if the demo is not found as per submitted documents, STC reserve the right to reject the bid.
5. The proposed make should comply to the other tender technical specification also, if found non- adherent to the tender conditions even after awarding the work, the contract of the contractor shall be terminated without any notice and the EMD/ Dues to STC shall be forfeited and the contractor shall be banned/black listed . The Proposed CCTV cameras and VMS should be from same make.
6. The camera and VMS OEM must have its own office & service and support centre in India registered under the Indian companies act and in operation for period of minimum three years as on 31/03/2015. Copies of company incorporation certificate shall be submitted.
7. The 'Make' of the camera & VMS offered must have installed base of at least 1000 nos. of IP cameras in the public safety domain in India as on 31/3/2015. The bidder must provide a certificate of OEM with supporting PO's to this effect.
8. Offered camera models and VMS software must be listed on ONVIF website for ONVIF Profile S conformance required for interoperability of all the devices. Print from ONVIF site shall be submitted which can be verified during evaluation.
9. Project is on turnkey basis. The contractor shall have to supply all the equipment necessary for SITC of CCTV surveillance system including IP cameras(PTZ, Box camera, Fish eye camera ),Video management system software and hardware ,Full

functional key board with variable speed joysticks (01) No., Video management storage, Network monitoring software , X Ray BIS( Baggage Inspection system ) ,HHMD ( Hand held Metal Detector), Hand Held Walkie-talkie, DFMD(Door Frame metal detector) , in Jawahar Vyapar Bhawan,1-Tolstoy Marg, Delhi, including all Electrical, mechanical works as required at site as per instruction of Engineer in-charge. The gate on the periphery of the JVB on Janpath in named as “A” gate and cyclically naming the gates towards gates at Tolstoy Marg as B gates onwards. The firm is advised to survey the building keenly before quote. STC shall not be responsible for any error of names or locations or measurement in the accessory items thereafter.

10. **The Mandatory quantities are as under:-**

(a) CCTV surveillance system –**Mandatory items**

S.no	Item description	Qty.	Location	Approved make
1	SITC of 2.1 MP PTZ camera as per technical specifications	08	-Gate A,B,D, -All four corners ) -Top of the building	Bosch/ Pelco /Honeywell/D -vtel/ Axis/Sony
2	SITC of 2.1 MP full HD Fixed box camera as per technical specifications	14	1.Parking area -basements 2 UG water tank area near SBI bank 3. Entrance of executive lift area in basement 4. .X BIS machine (with back light facility)-3 Nos. 5.Chairman’s lift passage ( G floor) 6. EPABX room 7. Control room for security 8. Reception with back light	--Do---

			9 10 th floor	
3	SITC of IP based fixed Dome camera 2.1MP as per specifications	30	01 cameras each on alternate floor covering lift waiting area , ( A wing -5 floors + 4 th floor annexe =06) (B wing - 9 floors + Canteen + main 10 th floor+ 10 th floor annexe =12) (C wing -23 floors =12 camera)	--Do---
4	SITC of IP based fixed Dome camera 2.1MP as per specifications	2	<b>Common area as below</b> -Reception area -Centre of lobby	---Do--
5	SITC of Network Video management system software and hardware with 100 camera licence	1		Axis/Bosch/ /Honeywell/ DVTEL/Milest one/ Mirasys
6	SITC of Full functional keyboard with variable speed joystick controller compatible with above mentioned matrix controller server.	1		Axis/Bosch/ /Honeywell/ Dvtel
7.	SITC of video management storage server-for 30 days	1		IBM/HP/DEL L
8	SITC of 42 inch high	2		SAMSUNG/S

	resolution colour LED monitor for matrix view dedicated to view camera inputs			ONY/LG/Panasonic
9.	SITC of 22 inch high resolution colour LED monitor for NMS view	1		--Do --
10	Network monitoring system software server	1		HP/IBM/Dell
11	ON LINE UPS –6 KVA rack mounted –( for 30 minutes back up time )	01		APC / Emerson / EATON
12	Supply and installation of Rack 36 u floor mounted for control room equipment.	01		Digital/Comm rack /APW
13	Split Air Conditioner 2 TR for control room	01		O-General/Hitachi/ carrier
14	Workstation	01		HP/Dell/IBM

(b) Other safety equipment - **MANDATORY**

S.no	Item description	Qty.	Location	Approved make
1	SITC of Hand held Metal Detector (4+1 standby)	10	For utilization -10 for 2 EACH on each gate. 2 shall be used as standby	Rapiscan/Garratt/CIEA
2	SITC of X Ray baggage Inspection system	03	Gates for STC in JVB	Rapiscan/Smith/ L3 Communication

3	SITC of Multi-zone DFMD (Door frame Metal Detector) for Main reception and back side entrance(C wing) on ground floor	3	Shall be deployed at 3 gates in STC area	Rapiscan/Garratt/CIEA
4	SITC of Hand held Walkie-talkie sets with accessories	8	6 shall be utilized by safety officers and their staff and 2 shall be put as standby	Kenwood/Motorola/Rexon

(c) **Accessory items** – Accessories required for installation of mandatory items but not limited to the following with approved make as under. if the accessory needed is not covered as under , the bidder shall have to take prior permission from STC to use that accessory in STC. The quantities have to be decided by the bidder for proper installation of systems.

Sr. No.	Particular	MAKE APPROVED
1	SITC of 24 port managed core 2 switch 10/100/1000 for control room with 2 SFP ports fully populated (with 2 SFPS)	Core/ Juniper /Cisco
2	SITC of POE switch 8 ports fully populated.	Edge Core/ Juniper /Cisco
3.	Supply and installation of Rack 36 u floor mounted for control room equipment.	Digital/Commrack /APW
4.	Supply and installation of Rack 6 u.	--Do---
5.	SITC of unarmoured power cable 3 core ,1.5 sq.mm	Polycab/ Kalinga/Finolex
6	SITC of 32 mm PVC conduit	BEC/AKG/AMP
7.	SITC of cat 6 cable	Polycab/ Kalinga/Finolex

8.	SITC of cat 6 I/O face plate & box for cable termination	BEC/AKG/AMP
9.	SITC of cat 6 patch cord (2 mtrs.)	BEC/AKG/AMP
10	SITC of Junction box for our door camera	L&T/HAVELLS/SIEMENS/ ABB/C&S/
11.	SITC of Hanging down pole with 1/1 base plate for CCTC cameras	Industry Standards
12.	SITC of Armoured 6 core multi's FO cable	Digilink/polycab/NIG/ BEC/AKG/AMP
13	SITC of Media converter.	Cisco/HP/Digilink/polycab/ NIG/ BEC/AKG/AMP
14.	SITC of Light Interface Unit (LIU )	--Do---
15.	SITC of Fibre patch cords.	--Do---
16	SITC of Single mode gigabit SFP module	HP/Cisco/Juniper
17.	Supply and installation of Pole 6 mtr height	Industry Standard
18.	SITC of UHF Static Base sets with antenna, battery and accessories.	As per standards

#### 11 Other conditions :-

1. The installed system should have a sufficient memory to record and preserve the data for at least 1(one) month before and the live coverage of the events should be appeared on 02 nos. of 42" HD LED monitor. The configuration should have provision of at least (04) four Picture in Picture (PIP) on each screen simultaneously.
2. Contractor shall also supply other equipment including cables & isolating switch necessary to operate the system, necessary brakes and limit switches, all other protective devices including switch, fuse starters etc, all rigid/ flexible conduit, ferrules, lugs, glands, terminal blocks cable clamps general purpose/ flexible cables automatic leveling device and other misc. items are required. All necessary insulated wiring in conduits or tubing together with necessary fittings, metal boxes, through and

ducts, trailing cables, shall be supplied and installed by the Contractor in conformity with the Indian Electricity Rules or IS Codes as applicable. System should be capable of withstanding +/- 10% voltage fluctuation

3. The contractor shall supply UPS ( Un-interrupted power supplies) of 6 KVA on line to preserve the data for 1 hour duration in case of power failure
4. The control room of the CCTV system shall be located on the ground floor of the Jawahar Vyapar Bhawan. The contractor is required to take all measurements like cable lengths, configuration, and arrangement other equipment's for the purpose. The contractor shall have to arrange all other accessories required for the functioning of the control room at their own cost.
5. The contractor is required to complete the work as per the bill of material,
6. Contractor may be asked to submit the VAT bills for cross checking the genuineness of the material and the contractor has to submit if asked so, failure in doing so shall be deemed as fraud purchase and shall not be allowed to continue the work
7. The consignee of the material shall be the Chief Manger (Electrical), STC of India Ltd., Jawahar Vyapar Bhawan, New Delhi. The contractor shall ensure the safety of the material after delivery to the site.
8. The technical speciation must be followed for every make offered.



## TECHNICAL SPECIFICATIONS

### GENERAL SITE CONDITIONS:

Max. Ambient Temperature:	50 degree C (Designed)
Min. Ambient Temperature:	4 degree C
Max. R H	: 97%
Min. R H	: 30%
Location of site	: Jawahar Vyapar Bhawan, 1-Tolstoy Marg, New Delhi

#### 1. Inspection of Site :

The bidder should inspect and examine the site and its surrounding and shall satisfy as to the nature of the ground and sub soil, the quantities and nature of work, materials necessary for completion of the work and their availability, means of access to site and in general to obtain all necessary information as to risks, contingencies and other circumstances which may influence or affect his offer. No extra claim consequent on any misunderstanding or otherwise shall be allowed.

#### 2. (A) Design Concept

##### 1) IP CCTV SURVEILLANCE SYSTEM

##### (i) DESIGN CONCEPT:

- The entire IP surveillance system is designed to control and monitor the different segments of the Jawahar Vyapar Bhawan. The Tentative locations details of the location for proposed set up of various CCTV cameras are elaborated in separate sheet, However STC reserve the right to alter the location if so desired without any extra cost to STC.

THE Product brochure of the CCTV Surveillance system which compiles the technical specification mentioned in the tender document and the same should be submitted along with the bid, signed and stamped with the OEM. Non submission of the above shall call the rejection of the bid.

- There are three types of cameras shall be installed to monitor the movement of the people/vehicles as follows:

- IP Box type camera

- IP PTZ camera
- IP Dome camera
  - All cameras shall be true IP camera.
  - All outdoor cameras shall be in IP-66 housing.
  - All outdoor items for cameras like JB's, power supply, media convertor etc. shall be in water proof and dust proof housing ( IP66 or higher).
  - The bidder shall have to laid down LAN network to extend the IP CCTV connectivity to central control room
  - Material needed for UPS Power supply for LAN network shall be arranged by the contractor

**(B) Detailed specifications**

**(i) IP CCTV SURVEILLANCE SYSTEM:**

- Transmit and Receive H.264 and MJPEG simultaneously-4 Video and bi-directional Audio.
- Video and alarm management software under one single front end and should be on open platform with support to renowned IP camera brands
  - Support for multi user and multi user group environment in addition to user hierarchy
  - System should allow to be used as a distributed or central architecture with support to any number of cameras and any number of clients that may be added in future.
  - System Guarantees Bandwidth & Frame rate control.
  - Provides Activity Controlled Frame rate, which in turn reduces the Bandwidth and the Storage requirements.
  - Provides Broadcast quality Video across IP network including Internet.
  - Provides multiple failover and network resilience.
  - Provides real time recording at 25fps with no frame loss.
  - Provides PTZ Camera Controls & Binary INPUT/OUTPUT controls.
  - Supports Multiple IP Video Streams.
  - Secured recording for evidence purposes and user authentication to protect data integrity.
  - Video Stream bit rate selectable from 32 to 4096kbps or better
  - All the IP cameras shall have SD card slot for recording in SD card when network is down/fail.

**(ii) Specifications :-**

**(a) IP PTZ Camera 2 MP ( Outdoor Type )**

<b>IP PTZ Camera with HD1080P 2.1MP Resolution 20x Optical Zoom, Day/Night, WDR</b>		
<b>Sr. No</b>	<b>Specification</b>	<b>Description</b>
1	Image sensor	1/2.8" or bigger Progressive scan CMOS sensor with WDR support
2	Resolution	1920x1080p
3	Illumination	Colour-0.5 Lux @30IRE, Black & White- 0.05 Lux @30IRE
4	PAN	360deg endless, PAN speed up to 400 deg/s or better
5	Tilt	200 deg, Tilt speed up to 400 deg/s or better
6	Zoom	20x Optical, 10x digital zoom (Motorized 4.7mm-94mm)
7	Signal to Noise Ratio	>= 50dB, Back light compensation ON/OFF selectable
8	Compression	Dual H.264 compression standards.
9	Day/Night Camera	Auto day/night
10	FPS	Min 25 Frames per second for both the streams with Full HD @ 25FPS @ H.264 + D1 @ 25FPS @ H.264 on two streams respectively
11	Shutter speed	1 s to 1/10,000 or better
12	streams	Dual H.264 streams
13	Bit Rate	64Kbps to 8Mbps. Camera should able to give stream in both CBR and VBR. With CBR maximum of @2Mbps bit rate. Shall work on less than 3Mbps average for Full HD @ 25FPS @ VBR
14	Streaming	Camera should support unicast and multicast streams
15	Presets	256 preset positions
16	Privacy Masking	Required
17	Web interface	Web interface to configure and control
18	Text superimposing	Super impose the title and date & time on the video
19	Audio	Full Duplex Bi-directional
20	Alarm input	One Dry alarm input & Output
21	Edge Storage	Provision for 64GB SD Card.
22	Ethernet, Network protocols	10/100 Tx Auto sensing(half/full duplex), 802.3af PoE , IPv4/v6, SNMP, IGMP, DHCP.iSCSI
23	Discovery Interface	OEM interface to detect the cameras automatically and configure network settings.

24	Housing	vandal resistant Aluminum enclosure with IP66, IK 10, Sunshield, built in Heater & Blower
25	Power requirement	24V AC or PoE++ power supply for camera, Heater and Blower as per manufacturer standards.
26	Operating Temperature	0 to 50 C Degrees
27	Operating Humidity	20 to 80% RH non- condensing
28	Regulatory Approvals	FCC,CE, RoHS, UL/EN
29	Manufacturer Warranty	Minimum 2 years

**(b ) 2.1 Mega Pixel Full HD1080 Fixed (BOX) Camera Specifications**

2.1 Mega Pixel Full HD1080 Fixed (BOX) Camera Specifications.		
Sr.No.	Specification	Decription
1	Image sensor	1/3" Progressive scan CMOS sensor with WDR
2	Resolution	1920x1080p
3	Mega Pixel	2.1 Mega Pixel Full HD
3a	Lens	5-50 mm varifocal
4	Minimum illumination	Colour-0.5 Lux @301RE, Black & White-0.5 <a href="#">Lux@301RE</a>
5	Signal to Noise Ratio	=50dB, Back light compensating ON/OFF selectable
6	Compression	Dual H.264 compression standards.
7	Lens mount	CS/C type
8	Day/Night camera	Auto day/night configuration
9	FPS	Min 25 Frames per second for both the streams with Full HD @ 25FPS @ H.264 + D1 @ 25FPS @ H.264 on two streams respectively.
10	Shutter speed	1 s to 1/10,000 or better
11	Tamper Detection	ON/OFF

12	Bit Rate	64Kbps to 8Mbps. Camera should be able to give stream in both CBR and VBR. With CBR maximum of @2Mbps bit rate. Shall work on less than 3Mbps average for Full HD @ 25FPS @ VBR
13	Streaming	Camera should support unicast and multicast streams
14	Web interface	Camera should have web interface to configure and control
15	Text superimposing	Super imposing the title and date & time on the video
16	Alarm input	One Dry alarm input & output
17	Edge Storage	Provision for 64GB SD Card
18	Ethernet, Network protocols	10/100 Tx Auto sensing (half/full duplex), 802, 3af class 3 PoE, Ipv4/v6, Unicast, Multicast, RTP, TCP,UDP,HTTP,IGMP,ICMP,DHCP,DNS, ONVIF, SIP
19	Discovery Interface	OEM interface to detect the cameras automatically and configure network settings.
20	Housing	Vandal resistant Aluminium enclosure with IP66, Sunshield, built in Heater & Blower
21	Power requirement	PoE and Local power supply for camera, Heater and Blower as per manufacturer standard.
22	Operating Temperature	0 to 50 C Degrees
23	Operating Humidity	20 to 80% RH non-condensing
24	Regulatory approvals	FCC, CE, RoHS, UL/EN

**(c ) IP Based fixed Dome Camera**

2.1 Mega Pixel Full HD1080 Fixed Dome Camera Specifications.

Sr.No	Specification	Description
1	Image sensor	1/3" Progressive scan CMOS sensor, WDR
2	Mega Pixel	2.1 Mega Pixel Full HD
3	Resolution	1920 x 1080 or better and camera resolution can be configurable in all standards resolutions like VGA, 4CIF/D1, HD 720p
4	Illumination	Colour-0.5 Lux @301RE, Black & White -0.5 Lux @ 301RE, IR sensitive, Back light compensation ON/OFF selectable
5	Signal to Noise Ratio	=50dB
6	Compression	Dual H.264 compression standards.
7	Varifocal lens	Focal Length: 5mm – 50 mm
8	Lens mont	Integrated
9	Day/Night camera	Should have Auto day/night configuration with auto AGC
10	FPS	Min 25 Frames per second for both the streams with Full HD @ 25FPS @ H.264 + D1 @ 25FPS @ H.264 on two streams respectively.
11	Shutter speed	1 s to 1/10,000 or better
12	Digital Zooming	Up to 4 X digital zoom the live video
13	Strems	Camera should have minimum dual stream, and each stream can be individually configurable, and can able to choose stream for live and recording.
14	Streaming	Camera should support unicast and multicast streams
15	Bit Rat	Camera should able to give stream in both CBR and VBR. With CBR maximum of @2Mbps bit rate. Shall work on less than 3Mbps average for Full HD @ 25FPS @ VBR

16	Web interface	Camera should have web interface to configure and control
17	Alarm input	One Dry alarm input & output
18	Text superimposing	Camera should support the super impose the title and date & time on the video
19	Ethernet, Network protocols	10/100 Tx Auto sensing (half/full duplex), 802, 3af PoE, Ipv4/v6, SNMP, IGMP, DHCP, SIP
20	Housing	Vandal resistant Aluminium enclosure with IP66,IK 10 Indoor Housing
21	Power Requirement	PoE and Local power supply for camera, Heater and Blower as per manufacturer standard.
22	Operating Temperature	0 to 50 Degree C
23	Operating Humidity	20 to 80% RH non-condensing
24	Regulatory approvals	FCC, CE, RoHS, UL/EN

### **# Network Video Management Software (NVMS)**

S.No.	Minimum Functional Specifications
1	VMS Management
2	Failover Support
3	Multicasting and Multi-streaming
4	SNMPv3 Support
5	NAT Firewall support
6	Watchdog
7	Logs

8	VMS Client Viewer (Operator) features
9	Video Cart Facility
10	VMS storage
11	Video Content Analytics (VCA)
12	Hardware & Software
13	Video Standards and Formats
14	Behaviour Detection
15	PTZ Tracking
16	Tampering Detection
17	Event Generation and Receipt
18	Counting Capabilities
19	Management
20	Viewing Search Results Capabilities
21	Investigation and Forensic Analysis

### # Control Room IT Infrastructure

#### (a) Server: Network Video Management Server

Network video Management Server	Specification
CPU	Intel Xeon 8 CORE Processor EF-2690
2 nos. Of Processor	2 (TWO)
Memory Size	128 GB (min 8GBx16 or 16GBx8 or 32GBx4 combination), 133 Mhz or higher, upgradable to 768 GB or higher
Storage Details	Hot pluggable SAS HDD 5x600 GB, 10K RPM or higher



	with min 06 no or higher internal Drive bays
RAID controller	SAS Raid controller with RAID 0/1/1=0/5 with 512 MB or higher battery backed cache.
Optical Drive	DVD combo drive
Chassis type	19" Rack mountable Server of maximum 2U size with Sliding rails and fittings to install into a Rack.
Power supply &FAN Redundant	Hot swappable Power supply & Fan
Network interface	Min 4 no. Gigabit Ethernet ports or more
I/O Slots	Min 6 PCI/PCIE/PCIX slots or higher.
Compatible OS	Microsoft Windows Server, LINUX
Management	OEM Server Management Software
IPV 6 compliance	The Hardware should be IPV 6 Compliant ready
Monitor & KBD/Mouse	18.5" screen & USB Keyboard & Mouse.

**( b )Storage: Video Management Storage**

Storage	Specification(Video Management Storage Min 30 days Backup with 24x7)
System Architecture	<p>Storage system should be based on symmetric and fully distributed grid/scale-out architecture, with linear scalability of performance and capacity.</p> <p>Storage system should support nodes with multiple CPU architectures <u>(x86, RISC) in the same grid &amp; namespace to ensure future scalability.</u></p> <p>Storage system should support node controllers of different generations to participate in the same grid and namespace.</p>
Hard Disk type	Controller nodes should support 1TB, 4TB & 6TB, 7200RPM 3.5

	SATA Hot swap disk drives, Raid 5
Disk drives	Each node should contain a maximum 12 disk drives, to minimize hot spots
Storage Nodes	Storage system should scale from single node to 256 nodes. System should support capacity/performance enhancement with additional <u>nodes without downtime to production</u> Storage system should distribute/load balance video files across all nodes in <u>the system</u> In the event of addition/removal of nodes, the system should automatically <u>rebalance existing across remaining/all nodes.</u>
Controller Memory	Each storage node should support minimum 16GB and should be scalable to at least 32 GB
Network connectivity	Each storage node should support min. 4 Gbps aggregate Gigabit Ethernet ports and 400MB/sec aggregated network bandwidth for video streams
System Scalability/Expansion	Capacity: The storage system should support automatic scaling of <u>performance with every addition of capacity to the namespace.</u> Performance: The system should support automatic scaling of performance with every addition of capacity to the namespace
System Redundancies	Individual nodes should support configuration for single or two disk failures, as required. Storage node should support network port bonding and sustain port/link failures without connection loss
System management	System should support management of all nodes/controllers through a single window/dashboard
Data Access Protocol	NFSv3, CIFS/SMB
Access Control	Folder and File Level access control security for users and groups

	which enables only authorised user to access the video files
System Alerts	Integrated error logging and automatic email forwarding of error alerts and error display on web management console
Archiving support	Support for optional tape archiving module with drag and drop feature
Licensing	All above features (except optional tape archiving module) should be enabled and available on the storage system by default
Power Supply	Redundant power supply (230VAC, 50Hz)

### # Desktop: Video Management Client Access Desktop

Video Management Client Desktop	Specification
Desktop/Workstation	Processor i7, RAM 4 GB, Hard Disk 1TB, Display 18.5 Inch, Keyboard, Mouse, OS, Windows 8

### # Network monitoring software server

Network video Management Server	Specification
CPU	Intel Xeon 8 CORE Processor EF-2690
2 nos. Of Processor	2 (TWO)
Memory Size	128 GB (min 8GBx16 or 16GBx8 or 32GBx4 combination), 133 Mhz or higher, upgradable to 768 GB or higher
Storage Details	Hot pluggable SAS HDD 5x600 GB, 10K RPM or higher with min 06 no or higher internal Drive bays
RAID controller	SAS Raid controller with RAID 0/1/1=0/5 with 512 MB

	or higher battery backed cache.
Optical Drive	DVD combo drive
Chassis type	19" Rack mountable Server of maximum 2U size with Sliding rails and fittings to install into a Rack.
Power supply &FAN Redundant	Hot swappable Power supply & Fan
Network interface	Min 4 no. Gigabit Ethernet ports or more
I/O Slots	Min 6 PCI/PCIE/PCIX slots or higher.
Compatible OS	Microsoft Windows Server, LINUX
Management	OEM Server Management Software
IPV 6 compliance	The Hardware should be IPV 6 Compliant ready

#### **# 6 KVA UPS (ONLINE) WITH BATTERY BACKUP FOR 30 MINUTES :**

Application: Power supply requirement for IP CCTV,

: IGBT, on line double conversion

Input:

- Nominal AC Input Voltage: 1 Phase 230V AC + Neutral + Earth, 50 Hz
- Line low/ High transfer: +/- 15%
- Frequency range: +/- 5%
- Power factor: >0.9

Output

- Voltage: 220VAC/ 230VAC/ 240VAC
- Voltage Regulation: + 1%
- Frequency : 50 Hz +/- 0.1%
- Output waveform : Pure sine wave
- Harmonic distortion : < 2% (linear load) / 5 % nonlinear load
- Power factor : 0.7 to unity
- Crest factor : 3:1
- Inverter overload capacity: 110% 15 min./ 125% 10 min./ 150% 1 min./ > 150% 1 sec.
- Efficiency (AC – DC): 90%

- Bypass: Static bypass

#### Transfer time

- Line to battery mode : 0 ms
- Battery to line mode : 0 ms
- Line to bypass mode : <5ms synchronized with mains
- Bypass to line mode : <5ms synchronized with mains

#### Battery

- Battery type: SMF
- Communication interface
- Standard : RS 232 port for software interface
- Optional : SNMP

#### Display

- Standard: 2 line x 20 characters, Backlight LCD
- AC input voltage, AC input frequency, Battery voltage, AC output voltage, AC output frequency, AC output load %, Temperature
- UPS status (Mains fail, Individual phase fail, Battery low DC high, Overload with shut down time, Output low, Output high, Over temperature, UPS bypass)

#### General

- Operating temperature: 0 to 45 Deg C
- Humidity: Up to 95% RH, no condensing
- Noise level: < 60 dB @ 1 meter
- Indication: Mains ON, Inverter ON/ OFF/ Faulty, Battery level, Static bypass on, Load level, over temperature
- Audible alarm: Mains failure alarm/ Low battery alarm/ Overload and load on bypass/ DC high/ Inverter fault
- Protection: Advanced electronic protection for device safety backed with MCB's
- Parallel redundant option: Unitary/ Parallel redundant/ redundant hot standby

#### **# CAT – 6 Cable:**

- 23 AWG Annealed bare solid copper, CAT-6 UTP Cable, Channel optimized to 350 MHz
- Meets EIA/TIA 568-B.2-1 Category 6 specifications, Passed UL 444 test and meets CM and CMR ratings

- Worst Case Cable Skew: 45 n.sec/100 meters
- Characteristic Impedance: 100(+/- 3 ) Ohms 500MHz , Tested till 700 MHz
- Conductor Annealed copper wire Diameter 0.52 mm (nominal)
- Insulation High Density polyethylene, Diameter 0.94 mm (nominal)
- Support for Fast Ethernet and Gigabit Ethernet IEEE 802.3/5/12, Voice, ISDN, ATM 155 & 622 Mbps and Broadband
- DC Resistance Max: 6.6 Ohms/100m
- UL Listed and Third Party verified by ETL to “ANSI/TIA/ EIA-568-B-2.1” specifications
- Zero Bit Error verified by ETL
- Sheath Fire retardant PVC Compound (FRPVC) Flame Rating : 60 deg. C As per UL 1685 CM
- PAIRS Colour code: Blue / White-Blue, Orange / White-Orange Green / White-Green, Brown / White – Brown
- Outer Sheath PVC compound Thickness Diameter 0.5 mm (nominal) outer diameter 6.5 mm (nominal)
- Electrical Characteristics at 20° C Input Impedance (0.772-100 MHz) : 100 + 15 Ohms  
125-250 MHz) : 100 +/- 22 Ohms
- Mutual Capacitance: 5.0 nF/100m Capacitance, unbalance (Max.): 330pF/100m
- Standard length: 305 Metres (1000 ft.)

#### **# Power Supply Cable**

- 3CX1.5 /2.5/4 sq mm, multi strand with standard annealed electrolytic copper conductor armoured cable/flexible cable as per IS 1554.
- Primary insulation of 85° C PVC as IS-5831 Type C
- Colour code Red, Black and Green
- Inner and Outer Jacket: Extruded Flame retardant and 90° C PVC to IS 5831- Type ST2
- Inner and outer sheath - PVC Black
- Armouring - Galvanized Steel Wire/ flat as per IS-544 part I
- Armour coverage 95 %

## # ACTIVE NETWORK COMPONENTS

### (a) Layout 3 Switch (Core Switch)

Layers 3 Switch (Core Switch)	Specifications
	<p><u>Architecture</u></p> <ul style="list-style-type: none"> <li>• The switch shall be non-blocking in architecture and should have stand alone/stack/chassis. Shall be 19” Rack Mountable.</li> <li>• Shall have dual, hot-swappable AC Power supplies</li> <li>• Shall have 16 RJ-4S autosensing 10/100/1000 ports and 24 SFP Fixed Gigabit Ethernet SFP ports</li> <li>• Shall have 4 x fixed 1G/10G SFP + ports</li> <li>• Shall have 1 RJ-4S serial console port</li> <li>• Shall have 1 GB SDRAM and 512 MB flash</li> <li>• Shall have switching capacity of 208 Gbps</li> <li>• Shall have up to 155 million pps switching throughout</li> </ul> <p><u>Resiliency</u></p> <ul style="list-style-type: none"> <li>• Shall have the capability to extend the control plane across multiple active switches making it a virtual switching fabric, enabling interconnected switches to perform a single Layer-2 switch and Layer 3- router</li> <li>• Shall support virtual switching fabric creation across nine switches using 10GB Ethernet Links</li> <li>• IEEE 802.1D Spanning Tree Protocol, IEEE 802. Is Multiple spanning Tree Protocol</li> <li>• IEEE 802.3ad Link Aggregation Control Protocol (LACP)</li> <li>• Ring protocol support to provide sub-100 ms recovery for ring Ethernet based topology</li> <li>• Virtual Router Redundancy Protocol (VRRP) to allow a group of</li> </ul>

routers to dynamically back each other up to create highly available routed environments.

- Graceful restart for OSPF, IS-IS and BGP protocols
- Bidirectional Forwarding Detection (BFD) for OSPF, IS-IS and BGP protocols

#### Layer 2 Features

- Shall support up to 4,000 port or IEEE 802.1Q based VLANs
- Shall support GARP VLAN Registration Protocol or equivalent feature to allow automatic learning and dynamic assignment of VLANs.
- Shall have the capability to monitor link connectivity and shut down ports at both ends if uni-directional traffic detected, preventing loops.
- Shall support IEEE 802.1ad QinQ and Selective QinQ to increase the scalability of an Ethernet network by providing a hierarchical structure.
- Shall support Jumbo frames on GbE and 10-GbE ports Internet Group Management Protocol (IGMP)
- Multicast Listener Discovery (MLD) snooping
- IEEE 802.1AB Link Layer Discovery Protocol (LLDP)
- Multicast VLAN to allow multiple VLANs to receive the same Ipv4 or Ipv6 multicast traffic.

#### Layer-3 Features (any additional licenses required shall be included)

- Shall have Static routing for Ipv4 and Ipv6
- Shall have RIP for Ipv4(RIPv1/v2) and Ipv6(RIPng)
- Shall have OSPF for Ipv4 (OSPFv2) and Ipv6 (OSPFv3)
- Shall have IS-IS for Ipv4 and Ipv6 (IS-ISv6)
- Shall have Border Gateway Protocol 4 with support for Ipv6



addressing

- Shall have Policy-based routing
- Shall have Unicast Reverse Path Forwarding (uRPF)
- Shall support Ipv6 tunnelling to allow Ipv6 packets to traverse Ipv4-only networks by encapsulating the Ipv6 packet into a standard Ipv4 packet
- Dynamic Host configuration Protocol (DHCP) client, Relay and server
- PIM Dense Mode (PIM-DM), Sparse Mode (PIM-SM), and Source-Specific Mode (PIM-SSM) for Ipv4 and Ipv6 multicast applications.
- MPLS capability including MPLS VPNs and MPLS Traffic Engineering (MPLS TE)
- VPLS for data centre to data centre communication at Layer 2' provides support of hierarchical VPLS for scalability
- Shall provide support of hierarchical VPLS (H-VPLS) for scalability.

#### QoS and Security Features

- Access Control Lists for both Ipv4 and Ipv6 for filtering traffic to prevent unauthorized users from accessing the network
- Port-based rate limiting and access control list (ACL) based rate limiting.
- Congestion avoidance using Weighted Random Early Detection (WRED)
- Powerful QoS feature supporting strict priority (SP) queuing, weighted round robin (WRR), weighted fair queuing (WFQ), weighted deficit round robin (WDRR) and weighted random early discard (WRED)
- IEEE 802.1x to provide port-based user authentication with

multiple 802.1x authentication sessions per port

- Media access control (MAC) authentication to provide simple authentication based on a user's MAC address.
- Dynamic Host Configuration Protocol (DHCP) snooping to prevent unauthorized DHCP servers
- Port security and port isolation

#### Management features

- Configuration through the CLI, console, Telnet, SSH and Web Management
- SNMPv1, v2, and v3 and Remote monitoring (RMON) support.
- Sflow (RFC3176) or equivalent for traffic analysis.
- Management security through multiple privilege levels with password protection.
- FTP, TFTP, and SFTP support.
- Port mirroring to duplicate port traffic (ingress and egress) to a local or remote monitoring port.
- RADIUS/TACACS+ for switch security access administration.
- Network time Protocol(NTP) or equivalent support.
- Shall have Ethernet OAM(IEEE 802.3ah) management capability.

#### Environmental Features

- Shall provide support for RoHS and WEEE regulations.
- Shall be capable of supporting both AC and DC Power Inputs
- Operating temperature of 0 C to 45 C
- Safety and Emission standards including UL 60950-1; IEC 60950-1; VCCI Class A; EN 55022 Class A.

**(b) PoE Switch**

PoE Switch	Specification
	<ul style="list-style-type: none"><li>-The switch shall have 8 RJ-4S auto-negotiating 10/100/1000 PoE ports.</li><li>-The switch shall have two 1000BASE-X SFP port in addition to above ports.</li><li>-The switch shall support IEEE 802.3af PoE and IEEE 802.3at PoE+</li><li>-The switch shall have minimum 65 watts for PoE Power</li><li>-Shall support 1000 Base-SX,LX, and LX Bi-directional SFP transceivers</li><li>-Switching capacity of 20 Gbps</li><li>-Switching throughout of up to 14 million pps</li><li>-1 RJ-4S console port</li></ul> <p><u>Layer 2 Features</u></p> <ul style="list-style-type: none"><li>-Configurable up to 8000 MAC addresses</li><li>-Shall support IEEE 802.3ad Link Aggregation Control Protocol(LACP)</li><li>-Shall support IEEE 802.1D Spanning Tree Protocol</li><li>-Shall support IEEE 802.1w Rapid Spanning Tree Protocol for faster convergence</li><li>-Shall support IEEE 802.1s Multiple Spanning Tree Protocol</li><li>-Shall support IGMP snooping for multicast filtering instead of flooding traffic to all ports, improving network performance.</li><li>-Shall support MLD snooping to forward Ipv6 multicast traffic to the appropriate interface, preventing traffic flooding.</li><li>-Shall support IEEE 802.1AB Link Layer Discovery Protocol(LLDP)</li><li>-Shall support LLDP-MED (Media Endpoint discovery) to automatically configure network devices such as IP phones.</li></ul> <p><u>Layer 2 and Layer-3 features</u></p>

- Shall support IEEE 802.1Q with 4,094 simultaneous VLAN Ids
- shall support Voice VLANs
- Shall support gratuitous ARP to allow detection of duplicate IP addresses
- Shall supports up to 10 kilobyte frame size to improve the performance of large data transfers
- Shall support Static Ipv4/IPv6 routing, 32 static routes
- Shall support DHCP relay to simplify management of DHCP addresses in networks with multiple subnets.

#### Security and Qos Features

- Shall support port security and port isolation
- Shall support MAC and Port based ACLs enable network traffic, filtering and enhance network control.
- Shall support time-based ACLs to allow for greater flexibility with managing network access
- Shall support IEEE 802.1X and RADIUS network logins to control port-based access for authentication and accountability;
- Shall support MAC – Based authentication;
- Shall support strict priority queuing (SP), weighted round robin (WRR) queuing, and SP+WRR, DSCP
- Shall support ARP attackprotection feature to block ARP packets from unauthorized clients;
- Shall support DHCP snooping to block unauthorized DHCP Servers;
- Shall support STP BPDU protection preventing forged BPDU attacks'
- Shall support STP Root Guard to protect the root bridge from malicious attacks or configuration mistakes.

#### Management Features

- SNMP V2/V3, SSHv2, Limited CLI/Telnet, web based interface and Dual flash images;

	<ul style="list-style-type: none"> <li>-Ipv6 host support to be managed using Ipv6</li> <li>-Shall support Port mirroring;</li> <li>-Shall support intuitive Web GUI(Http/https) for easy management;</li> <li>-Shall support Limited command-line interface to deploy and troubleshoot;</li> <li>-Shall support management security through multiple privilege levels;</li> <li>-Shall support single IP address management for up to 16 switches</li> <li>-Shall support Network Time Protocol(NTP)</li> <li>-Shall have an operating temperature of 0 C to 40 C Safety and Emission;</li> <li>-UL 60950/IEC 60950-1/EN 60950-1 and FCC part 15 Class A/VCCI Class A/EN 55022 Class A'</li> </ul>
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**# Passive Network Components**

	Specifications
(a)	Fibre Cable : Fibre Cable 12 core
(b)	UTP Cable : CAT 6 cable
(c)	Power Cable : Power Cable 2.5 mm or 3.5 mm
(d)	PVC Chemicals
(e)	Flexi Pipe
(f)	Networks connector and cords
(g)	Rack 36U or 24 U or 9 U depending on network size
(h)	Junction Box

## # Technical specifications of X ray Baggage Inspection machine

### GENERAL

a). X-RAY Baggage Screening System shall be located at the specified location as per site requirement to screen passengers baggage before permitting entry and vital locations of premises.

### SCOPE

a). The specification of X Ray Baggage Screening System covers technical specification and requirement of baggage screening systems consisting of X Ray machine, entry/exit stainless steel roller, UPS, LCD colour monitors, operator control console etc. for baggage screening.

b).The machine should be capable of storing images and these images can be retrieved from a USB port using an external drive. The system shall be able to work continuously without interruption.

### SYSTEM DESCRIPTION

a) X Ray Baggage Screening System to be provided shall consist of X Ray machine, operator console with touch sensitive pad, stainless steel roller tables on entry and exit side, online UPS with maintenance free batteries for giving 30 minutes power back-up, LCD colour monitors, power cable, Combined Test Piece (CTP), Threat Image Projection (TIP) software etc.

b) X Ray Baggage Screening System shall have tunnel size of 600 (+ 5%) mm(width) x 400 (+5%) mm(height)

### GENERAL REQUIREMENTS

a). Original equipment Manufacturer or their authorized representative of X Ray Baggage Screening System shall have their service based in Delhi.

b). X Ray Baggage Screening System shall have quality system compliance (ISO 9001), CE complied and (AERB)Atomic Energy Regulate Board of India certified.

- c). The X-Ray machine shall comply with the film safety of ten passes of ISO 1600/33 DIN high-speed photographic film.
- d). The system should be capable of adapting to diverse operational requirements and evolving security challenges through easy customization of software-based controls and tools.
- e). The power supply available shall be 230V, 50Hz AC which may vary from 160 Volts to 270 Volts. All modules of the Screening System should work using this power supply only with requisite converters and voltage stabilizers of suitable capacity, if required.
- f). The X Ray Baggage Screening System shall be capable of bidirectional screening operation.

## **TECHNICAL REQUIREMENTS**

- a) X Ray Baggage Screening System should mainly consist of the following:
  - i. X-Ray system ; ii. Operator Control Console ; iii. Entry/ Exit Roller Table and UPS
- B). The X Ray Baggage Screening System shall have imaging capabilities using dual-energy folded detector array having minimum number of diodes for following tunnel sizes:  
  
For tunnel size 600 (+ 5%) mm(width) x 400 (+ 5%) mm(height):Sensor > 1000 photo diodes
- c). The X Ray Baggage Screening System shall have transparent colour feature providing a clear and robust colour images enabling the operator to interpret threat objects with higher degree of confidence.
- d). The machine should be capable of tri-material discrimination, organic/ inorganic stripping, reverse video, pseudo colour imaging, image annotation, real time continuous diagnostics and edge enhancement.
- e). The machine should have image zooming capability from minimum 2X – 16X zoom and continuous zoom up to 64X.

f). Each machine should have Threat Image Protection (TIP) software which can insert fictitious threat image at periodic intervals and tracks operator responses, allowing supervisor to access the effectiveness of the screening operations and encouraging operator to stay alert.

g). The system shall have image archive option that supports storage of up to minimum 20,000 images, determined by the user-defined expiration dates or on a first-in, first-out basis.

h). The system shall have audio and visual alarm for a threat after it has compared scanned objects to data on known threats and shall highlight suspect items for further analysis.

i). All the equipment shall be able to withstand operating temperature of 0 deg C to 40 Deg C and humidity of 95 % non-condensing. The storage temperature capacity should be -0 Deg C to 50 Deg C and airborne noise level of <70 dB (A)

## **HARDWARE REQUIREMENT**

### **X-Ray System of Tunnel Size 600 (+ 5%) mm x 400 (+ 5%) mm**

i) Large tunnel opening of X-Ray system shall be not less than 600 (+ 5%) mm (width) x 400 (+5%) mm (height)

ii) The machine shall work on 230 V AC voltage ,single phase, 50 Hz ,5 Amp max.

The power supply available shall be 230V/ 50Hz AC which may vary from 160 Volts to 270 Volts. The equipment should be able to with stand the voltage fluctuations

iii) The X Ray machine shall meet the following minimum technical requirements.

i.	Conveyor Length	2100 mm (maximum)
ii.	Conveyor Height	810 mm (maximum)
iii.	Conveyor Speed	220 mm per second (minimum)
iv.	Conveyor Capacity	160 Kg (minimum)



iv) **X Ray Requirements:** The X Ray machine shall have following minimum technical specification.

i.	Tank Voltage operating	160 kV
ii.	Duty Cycle	100 %
iii.	Cooling	Sealed Oil Bath
iv.	Beam Orientation	Vertically upward
v.	X Ray Sensor	Sensor > 1000 photo diodes in folded array (L Shaped) configuration. In case of defective diode arrays scanning should be disabled & error message should be displayed on screen

iv) **X Ray Imaging & Performance** : The X ray machine shall have the following minimum technical specifications and features for imaging :

i.	Resolution	38 AWG Guaranteed.
ii.	Steel Penetration	35 mm Guaranteed
iii.	Contrast Sensitivity	4096 Gray Level Stored.
iv.	Video Resolution	1280 X 1024/24 bits/pixel colour
v.	Video Display	High resolution 19" LCD high resolution, flicker free display Ergonomic, LCD Colour monitor.
vi.	Computer Processor	Intel core i5 processor.

a). The machine should have features of multi energy X-ray imaging facility where materials of different atomic number will be displayed in different colors to distinguish between organic and inorganic materials. With this method to distinguish high density organic materials including explosives. Machine should have variable color or materials stripping to facilitate the operator to monitor images of organic materials for closer scrutiny. All suspicious items (Explosive High density, material narcotics) should be displayed in one mode and that should be on line.

- b). Radiation Safety: The machine must comply with requirements of health and safety regulations with regard to mechanical, electrical and radiation hazards. The radiation level should not exceed excepted health standard (0.1m R/Hr. at a distance of 5 cm from external housing). AERB certification in this regard is mandatory. Before installation of the machine the supplier / manufacturer should furnish relevant certificate from (AERB) Atomic Energy Regulate Board of India regarding radiation safety. To comply with all applicable health & Radiation Safety regulations for X-Ray system.
- c). The company manufacturing the equipment should have ISO certification for manufacturing and serving of X-ray Screening machine.
- d). Film safety: Guaranteed safety for high speed films up to I50-1600. The machines should be film safe. In other words photographic films must not be damaged due to X-Ray examination.
- e). Machine should be rodent protected Dust proof cover is to be provided for covering when system is not in use.
- f). Facility for variable gamma must be incorporated to allow enhancement lighter and darker portion of the image.
- g). The machine should be so designed that software enhancement can be easily implemented to take care of new technique in image processing and pattern recognition.
- h). Through put should be 200 bags per hour or more. All software features of machine should be online and password protected.
- i). Full diagnostic built in test facility. All models should have software controlled diagnosis report facility and system should give printout if printer is connected.
- j). All software features of machine should be online and password protected.
- k). Machine should be capable for recalling 20 previous images
- l). The operator personal identification number can be entered the keyboard.

m). Facility of image enhancement should be available.

All models should have online recording facility and images can be recorded in CD/DVD/ R/W.

Lead impregnated safety screens should be available at either ends of the tunnel. Idle roller provided at either ends of the tunnel to facilitate placing of baggage at input and output.

System should work on one software only. All software features should be controlled from Keyboard of machine only. Keyboard function should be user friendly. To enable/disable the software features system should not be rebooted.

If the machine fails to penetrate a particular item then an alarm video and audio both should be generated to notify the operator.

The threat image projection (TIP) system software to be incorporated in all X-Ray BIS operation.

Copy of all software including X-Ray software with recovery CD must be provided

Operational Training - Operating staff has to be provided free training

One operating & service manual shall be provided with each machine

v). Other Features to include following:

i). Edge & Variable edge enhancement.

ii). Inverse Video

iii). Fast initial warm-up

iv). Pseudo color

v). Date & time display.

### **Computer Specifications**

- Computer: Intel CPU: Intel Core i5 Processor, 3.4 GHz, 3 MB L2 Cache  
Motherboards: with applicable Intel chip set, or better on OEM Motherboard. □
- Bus Architecture: Intel Graphics, 2PCI, 1 PCI Express x 1 and 1 PCI Express x16  
□ Memory: 4GB DDR3 RAM with minimum 4 total DIMM slots.
- Hard Disk Drive: 500GB 7200 rpm serial ATA HDD.
- Mouse: Optical, Keyboard: Backlit windows keyboard.

- Ports: 6 No"s USB\_3.0 ports
- DMI: DMI 2.0 compliance and support.
- CD-R/RW Drive: DVD writer
- Networking facility: 10/100/1000 on board integrated Network Port with remote booting facility remote system installation, remote wake up, out of bad management using any standard management software.
- Operating System: Windows version
- Note: Specified above are minimum requirements.

### ***Operator Control Console***

- Operator interface shall provide a simple, flexible and powerful way for operator to control the system and make maximum use of the imaging information.
- The operator interface shall combine not more than three button conveyor control with a touch sensitive pad allowing heads-up operation.

### **Entry/ Exit roller Table:**

- Two stainless steel roller tables shall be provided with each system, one at the entry side and other at the exit side.
- Each roller table shall of at least **0.5 meter length**. The height should be adjustable according to the height of the system conveyor.

### **Uninterrupted Power Supply (UPS):**

Each X-Ray system of the tunnel size 600 (+ 5%) mm (width) x 400 (+5%) mm (height) shall have an external single phase 2kVA On-line UPS to support PC and electronics It should be of Standard manufacturer make with maintenance free battery to provide power back-up for at least 30 minutes or as specified by the purchaser.

**Combined Test Piece (CTP):** Each system shall have a Combined Test Piece (CTP) for testing the steel penetration, wire resolution, organic and inorganic material discrimination of the machine.

## **SOFTWARE REQUIREMENTS**

### ***Image Management Software***

It shall offer a complete X-Ray image analysis solution that shall be pre-installed in the system's PC. The software shall provide the following:

- Visual alerts to the operator in case of a threat or high density object.
- Operator logs
- Date, Time and Operator ID

Entire toolbar shall be available on the screen for the operator to select and use required icon of the image analysis feature.

Self-diagnostics tool with error message and system configuration tool.

### **Threat Image Projection (TIP) Software Features:**

The TIP software shall perform the following applications:

- i). TIP software facility shall be incorporated in the X-Ray machines to assist supervisors in testing the operator alertness and training X-ray screeners to improve their ability in identifying specific threat object.
- ii). The system should create a threat object and the same should be superimposed on the monitoring screen while a bag is being screened. To acknowledge that the operator has seen the false object, operator shall use the required toolbar icon using the control panel that should cause the computer generated threat object to disappear from X-rayed bag image on the display screen. Each operator's action shall be recorded in the hard disc of the computer for the auditing purpose by the supervisor or other authorized person.
- iii). The TIP facility should have an image library containing at least 100 explosive devices, 100 knives and 100 firearms in various sizes, shapes, locations and orientations. However, the system shall have facility to expand the library to incorporate additional images.

- iv). The image library should contain images of threats at different orientation.
  
- v). Programming facility shall be available to project threat images at different intervals. The time period for threat image as well as image mix in percentage shall be user programmable.
  
- vi). The threat image projection facility shall have details of user data base such as screener name, organization, user ID number, level of access such as screener, administrator, maintenance schedule and password etc.
  
- vii). Access to start up menu should be restricted only to the authorized individuals. A login procedure by means of password or security key should provide restricted access.
  
- viii). The threat image projection should be capable of giving feedback message. No message will be presented if a screener correctly passed as clear bag. (HIT, MISS, ALARM message)
  
- ix). The system shall automatically prepare the daily log of events for each screener performance.

### **COMBINED TEST PIECE (CTP) TESTS REQUIREMENTS:**

#### **Single Wire Resolution (Test No. 1)**

The requirement is to display 38 AWG guaranteed (40 SWG typical) wire not covered by step wedge. A tick should indicate the visibility of appropriate wire. A set of un-insulated tinned copper wire of different sizes in SWG should be placed on a Perspex sheet. Wires are to be laid out in S shaped curves. The wires should be placed behind varying thickness of aluminum. Metallic marker should be provided using high density material, so that SWG numbers in the Video Display Unit (VDU) are clearly visible.

#### **Useful Penetration ( Test No. 2 )**

The test defines what level of details can be seen behind a thickness of known material. The CTP should have different gauges of wire behind varying thickness of aluminum. The requirement of this test is that the 26 SWG wire should be seen under second step wedge (5/16”).

### **Material discrimination (Test No. 3):**

The requirement is that different colours should be allocated to the sample of organic and inorganic substances. With multi energy X-Ray, it should be possible to distinguish between materials of different average atomic number for differentiating between organic and inorganic substances. The use of sugar and salt samples encapsulated on the test piece and various materials used in the construction of CTP should check the material discrimination facility

### **Sample Penetration (Test No. 4):**

The requirement is that the lead should be visible beneath 29mm of steel. This test defines what thickness of steel the machine should be able to penetrate.

### **Method of Testing:**

The CTP should be viewed by using image enhancing facility till the operator is satisfied that the machine is working properly. The optimum position of CTP on the belt will depend on X-Ray source and detector arrangement. This should be ascertained from the service engineer, if need arises

The best Result out of multiple scanning of CTP in both colour and black and white images shall be taken into account for a particular machine.

## **TEST REQUIREMENTS**

### **Conditions of Tests:**

- i). Unless otherwise specified all tests shall be carried out at ambient atmospheric conditions.
- ii). Inspection and testing shall be carried out to the effect that all requirements of this specification are complied with.
- iii). Inspection shall be carried out for one complete unit of X-Ray Baggage Screening System along with associated accessories.

## TRAINING

- a) On-site training shall be provided to operating staff/ security personnel.
- b) Sets of training manual in hard copies and soft copies for equipment containing details of the technical specifications, installation and commissioning, troubleshooting & maintenance schedule etc. shall be supplied along with the system.

### **# Technical specifications of HAND HELD METAL DETECTORS**

Sr. No.	Particulars	
1.	Dimension	Probe width : Maximum 120 mm Length : Maximum 500 mm
2.	Body width	Maximum 65 mm
3.	Weight	Maximum : 500 gms ( with battery)
4.	Power source	Alkaline battery 9 volt and should run minimum 100 hours
5.	Battery Protection	To be provided against damage due to reverse polarity
6.	Indication	Single LED based audio and visual multiple indication for: Switch on Metal detection Low battery indication
7.	Operation	Single push button operation
8.	Construction	Should be rugged and impact resistant ABS moulded casing
9.	Scan Rate	Minimum 3" to 24" per second
10.	Detection	Should be able to detect ferrous and no-ferrous metals



		Pistol .22 at minimum 6" Cartridge .22 minimum at 2" Razor Blade at minimum 1"
11	Tuning	Automatic to ensure equal result on wide range of metals and alloys
12	Operating Temperatures Humidity	-10 to + 55 Celsius. 0 to 95 % non-condensing
13	Safety	The detector should be safe for people with pacemakers and should not affect magnetic recording media
14	Warranty	2 years from the date of supply
15	Life of Equipment	Minimum 5 years
16.	Miscellaneous	The contractor should be able to provide the following, as applicable, along with the equipment: Cleaning kit Technical Manual giving full description of equipment User's Hand Book

**# Technical specification of Multi zone door frame metal detectors**

Sr. No.	PARTICULARS	
1.	Technology	Pulse Induction Technology
2.	Passage Dimensions	Height: 200 cm, Breadth: 072 cm, Width: 057 cm.
3	Weight	90 Kg maximum

4	Power Supply	220 + 10 VAC/ 50 Hz, Power ON delay: 10-20 seconds
5	Alarm Signal	<ul style="list-style-type: none"> <li>a. Acoustic and optical alarm</li> <li>b. Alphanumeric display and zone display.</li> <li>c. Height on person bar display (metal locator).</li> </ul>
6	Sensitivity	Wide range of sensitivity setting and fine tuning. All zones individually adjustable
7	Zones	Not less than eight zones, covering full height of instrument.
8	Calibration	Manual and automatic by built-in key pad and by remote control via a serial/ wireless link. All function should be programmable and controlled by a microprocessor
9	Counter	Intelligent traffic counter for transit.
10	Detection	<ul style="list-style-type: none"> <li>a. Uniform from top to bottom.</li> <li>b. Should be capable to detect both ferrous and non ferrous metals.</li> <li>c. High discrimination between small masses and personal metallic objects.</li> <li>d. Should be able to detect multiple metal objects of various sizes in all the zones simultaneously.</li> <li>e. Automatic synchronization for DFMDs located close to each other up to a distance of one foot side by side.</li> </ul>
11	Throughput rate	25 people per minute
12	Protection	Conform to relevant electric safety standard (supported by test certificate from NABL(India) or other accredited labs from the country of origin of the equipment).
13	Safety	<ul style="list-style-type: none"> <li>a. Programming protected by pass word.</li> <li>b. Magnetic field should be harmless to magnetic media, electronic devices (supported by test certificates from NABL (India) or other accredited labs from the country of origin of the equipment), weaver of heart pacemakers and pregnant women (By a Government recognized medical institute).</li> </ul>

		<p>c. Should not be affected by heavily reinforced floors.</p> <p>d. Should not be affected by external RF transmission and EMI.</p> <p>e. Should automatically adjust to stationary metal in the vicinity at any distance.</p>
14	Accessories to be provided	<p>a. Operating manual for user.</p> <p>b. Text samples for testing during commissioning and during maintenance.</p>
15	Humidity	Up to 95% Non-Condensing
16	Operating Temperature	From -5 to 55 degree centigrade
17	Warranty	Three years

### **Technical specification of Walkie- Talkie**

#### General

Sr. No.	Particular	Range
1.	Frequency Range	UHF , 350-300 MHz
2.	Channel capacity	16(15+1)
3.	Channel spacing	25(KHz), 12.5 KHz
4.	Frequency stability	± 2.5.PPM
5.	Operating temperature	-35 c - +60 C
6.	Antenna Impedance	50 Ω
7.	Operating Voltage	7.4 V
8.	Battery	2200 mAh Li-ion –rechargeable minimum

## Transmitter

Sr. No.	Particular	Range
1.	RF power (H/L)	7W/4W/1W
2.	Modulation type	16 Kbf3E/BKOF3E
3.	Modulation Limiting	$\pm 5$ KHz / $\pm 2$ kHz
4.	FM Distortion	<5%
5.	Residual FM	FM-45 Db B/-40Db
6.	Adjacent Channel Power	-70 Db/-60Db
7.	Spurious and Harmonics	< 35 dB

## Receiver

Sr. No.	Particular	Range
1.	Sensitivity	0.22 $\mu$ V/0.25 V
2.	Adjacent channel selectivity	70Db/60 Db
3.	Intermodulation Reject ratio	65Db
4.	Spurious Response Reject ratio	70 Db
5.	8/N	45Db/40Db
6.	Rated Auto power output	500 mw
7.	Rated audio distortion	<5%

1. License shall be arranged by the supplier , fee shall be reimbursed by STC
2. Scan/Monitor facility
3. Hands free facility
4. Room monitor
5. Handset connector
6. 5 call tones –minimum
7. Two bely clip
8. Twin Charger and pod

9. Instruction manual
10. VoX
11. Auto squelch
12. Channel monitor
13. Timer
14. Key pad tone
15. Talk contractoration tone/Roger
16. AC adapter
17. The battery supplied should be capable for minimum 24 hours
18. LCD disply with back light
19. Key pad lock
20. Single pin headset connector
21. Water Resistant bag.

4. Note: - Bidder has to include all the items which are necessarily required for the completion of the project even if those are not mentioned in the detailed B.O.Q. or tender terms. Nothing extra shall be paid on this account.

(Chief Manger –E )

### **COMPREHENSIVE ANNUAL MAINTENANCE CONTRACT CAMC (OPTIONAL).**

1. STC will enter into a Comprehensive AMC with the successful contractor for a period of 1 year after expiry of 1 year warranty of the entire systems including all material and consumable items like cables, connectors, conduits etc and services. Nothing extra shall be paid by STC for services and material.
2. If STC decides to exercise the option to enter into Comprehensive Annual Maintenance Contract upon expiry of warranty period of 1 years, the agreement for Annual Maintenance Contract will be signed with the successful contractor at least one month prior to the expiry of the warranty period. The CAMC rates will be specified by the contractor in commercial bid which will be once again negotiated, if required.
3. The contractor is required submit a Performance Bank Guarantee of 10% of the CAMC value to the STC and the PBG will remain valid for the entire AMC period.
4. CAMC charges for each year shall be paid on half yearly basis after every six months after rendering the services.
5. The contractor should have support office in Delhi/NCR in order to provide round the clock telephonic and on-site support. The details of the support office including office address, Name and contact no. of the office in charge, details of the skilled engineers (name, contact phone/ mobile nos. etc.) should be provided in the offer.
6. During the CAMC period, the contractor should provide support on all 365 days including Saturday, Sunday and all Holidays for the entire hardware in order to maintain the required uptime. All the calls will be communicated to your local office through telephone or email. It would be the responsibility of contractor to ensure the desired uptime to avoid any penalties.
7. During the CAMC period, the contractor must provide all the patches and upgrades for the entire System at no additional cost to STC. These upgrades and patches would be installed at STC site as and when necessary. It would be contractor's responsibility to maintain the necessary spares for the entire system at their Delhi/NCR Office in order to meet the spares requirement on site on 24x7x365 basis (including Saturday, Sunday and all Holidays).

8. The contractor should ensure an uptime of minimum 99.5% for the entire system during AMC period failing which a penalty would be imposed @ Rs. 500/- per hour exceeding the allowable downtime of 0.5% for 365/366 Days.

AMC Uptime/Downtime Calculation:

Uptime of the entire items:

@99.5% yearly indicates availability & proper functioning of entire items for 363.175 Days= 8716.2 Hrs.

Downtime Allowed Yearly:

@ 365 days = (365x24) Hrs. – 8716.2 Hrs. = 43.8 Hrs. Yearly.

Downtime Allowed Monthly:

@ 43.8Hrs/12= 3.65 Hrs.

Therefore the maximum time allowed for a particular equipment to remain down monthly (exclusive of allowable repairing time of 1 Hr., Journey Time of 2 Hrs. & Night hours provided the fault occurred in night time) = 3.65 Hrs., beyond this penalty @ Rs 500/- will be charged per hour.

9. Preventive Maintenance Service. The contractor will provide a minimum of twelve Preventive Maintenance Services visits during a year to the operating base to carry out functional checkups and minor adjustments/tuning as may be required.

10. In case, it is observed, the services provided by the contractor during CAMC period is unsatisfactory, they the STC has every right to terminate the service contract with a notice period of 10 days in advance and if the STC opts to maintain the system in house or through a third party during the residue CAMC period, the contractor will continue to provide all spares/modules required on payment basis to maintain the Hardware in their original configuration and if it failed to do so will amount to breach of contract and will also forfeit the Bank Guarantee held towards CAMC.

## Price Bid

Prices for, Supply, Installation, Testing & Commissioning (SITC ) of CCTV surveillance system , X Ray BIS( Baggage Inspection system ) ,HHMD ( Hand held Metal Detector), Hand Held Walkie talkie, DFMD(Door Frame metal detector) in Jawahar Vyapar Bhawan,1-Tolstoy Marg, Delhi The rates quoted should be inclusive all taxes and duties including VAT, Octroi, Insurance, Exit tax, Freight etc.

(A) IP Based CCTV surveillance system

A. CCTV SURVEILLANCE SYSTEM					
S.no	Item description	UO M	Qty.	Price/unit (Rs.)	Amount (Rs.)
1	SITC of Complete IP based CCTV surveillance system as per mandatory items ( Scope of supply) along with complete accessories as required	Lot	1		
	Total(A)( in words)				

## (B.) OTHER SAFETY EQUIPMENT

S.no	Item description	UOM	Qty.	Price/unit(Rs.)	Amount (Rs.)
1	SITC of Hand held Metal Detector (4+1 standby) with all accessory items necessary for successful installation	no.	10		
2	SITC of X Ray baggage Inspection system with all accessory items	no.	03		



	necessary for successful installation				
3	SITC of Multi-zone DFMD (Door frame Metal Detector for Main reception and back side entrance(C wing) on ground floor with all accessory items necessary for successful installation	no.	3		
4	SITC of Hand held Walkie-talkie sets with accessories with all accessory items necessary for successful installation	no.	8		
Total (B)					
In words					

( C ) Comprehensive Annual maintenance Contract 1 (one) year

Sr. No.	Particular	Rate for one year ( comprehensive AMC)	Amount ( Rs.)
	Comprehensive Annual maintenance contract for one year including all material and services , ( including all taxes and duties except service tax)		
		Total	
In words			

Total amount (A) + ( B)+ (C ) = Rs Figures (Rs.) .....

In Words .....

Signature, Name and seal of the bidder

**Note :-**

1. The price comparison shall be done on the basis of Total Cost of the Work ie (A) + (B) +( C ) . STC will have an option to award the AMC after defect liability period.
2. No other format of price submission shall be accepted. Bidder should sign on Every Page of the bid.
3. The bidder is required to quote for the complete work, though STC reserve the right to award the work in full or in part.
4. Bidder quoting for only one part or partially of the above shall not be considered.
- 5 The offer shall be valid for 90 days from the date of tender opening
6. Leaving an unfilled entry in the price bid against any term shall mean as Zero cost and the bid shall be evaluated accordingly.
7. Bidder should follow the technical specification as described in tender document.
8. All prices are inclusive of all taxes (Except service tax), freight up to site, labour and Material etc.
9. The contractor has to quote considering the location of the cameras and other accessories necessary for successful design, supply , installation testing commissioning of CCTV surveillance system , X Ray BIS( Baggage Inspection system ) ,HHMD ( Hand held Metal Detector), Hand Held Walkie-talkie, DFMD(Door Frame metal detector) , in Jawahar Vyapar Bhawan,1-Tolstoy Marg, Delhi. The accessories shall include but not limited to the following. The accessories are indicative and it is intended to install the system in successful manner .The contractor has to quote as per site condition, considering the fact that this is a “Turnkey “Project. Following is an indicative list of items that may be used for successful installation. No extra cost shall be payable for accessories as indicated below. The contractor has to survey the building for assessment of accessory quantities required for the installation and commissioning of mandatory items.
  - (a) 24 port managed core 2 switch 10/100/1000 for control room with 2 SFP ports fully populated (with 2 SFPS)
  - (b) POE switch 8 ports fully populated.
  - ( c) Rack 36 u floor mounted for control room equipment.
  - (d ) Rack 6 u
  - ( e) unarmored power cable 3 core ,1.5 sq.mm

- (f) 32 mm PVC conduit
- (g) cat 6 cable
- (h) cat 6 I/O face plate & box for cable termination  
cat 6 patch cord (2 mtrs.)
- (i) Junction box for our door camera
- (j) Hanging down pole with 1/1 base plate for CCTV cameras
- (k) Armored 6 core multi's FO cable
- (l) Media converter
- (m) LIU.
- (n) Fiber patch cords
- (o) Single mode gigabit SFP module
- (p) Pole 6 mtr height
- (q) Other accessories needed like ,Ethernet switches , etc
- (r) VHF Static Base sets with antenna, battery and accessories with all accessory items
- (s) any other works like electrical and civil works
- (t) Any other works including civil, electrical, mechanical that is necessary for successful and proper installation of CCTV surveillance and other safety equipment installation as “complete”. The contractor shall have to carry out all these other works as per requirement of STC without any extra cost.**

( Chief Manger –E )

State Trading Corporation of India Ltd.