

**FOR THE SUPPLY
OF
EQUIPMENT AND SERVICES
FOR
GIS/GPS BASED AUTOMATIC VEHICLE
TRACKING SYSTEM (AVTS)
INCLUDING
AUTOMATIC CALL DISTRIBUTION (ACD)**

By

**Punjab Police Housing Corporation
SCO 171-72, Sector 8-C, Chandigarh.**

INDEX

S. No	Description		Page Nos.
1.	Index & Important dates		
2.	Chapter - 1	Instructions to Bidders	3-10
3.	Chapter - 2	Conditions of Contract	11-20
4.	Chapter - 3	Schedule of Requirements	21-24
5.	Chapter - 4	Specifications and allied Technical Details	25-41
6.	Chapter- 5	ACD Specifications and Technical Details	42-53
7.	Chapter - 6	Price Schedule for quoting prices as per schedule of requirement in Chapter-3	54
8.	Chapter - 7	Contract Form	55-57
9.	Chapter - 8	Other Standard Forms:	
8.1	Annexure-T1	Bidders Particulars	58
8.2	Annexure-T2	Bid Form	59
8.3	Annexure-T3	Guarantee/warranty	60
8.4	Annexure-T4	Company details for eligibility criterion	61-62
8.5	Annexure-T5	Performa for ST clearance certificate	63
8.6	Annexure-T6	Check List - Technical Bid	64
8.7	Annexure-T7	Acceptance Test	65
8.8	Annexure-C1	Bid letter	66
8.8	Annexure-C2	Performa for Contract Performance Bank Guarantee	67-68
8.9	Annexure-C3	Break-up of spares to be quoted in Chapter-5	69
8.10	Annexure-C4	Check List - Commercial Bid	70

IMPORTANT DATES

Last date for submission of sealed bids at Punjab Police Housing Corporation, SCO 171-72 Sector 8, Chandigarh	27.11.2009 latest by 1400 hrs
Pre-Bid Conference	16.11.2009 at 1130 hrs
Demonstration of the quoted System	Between 16.11.2009 to 26.11.2009
Opening of technical bids	1430 hrs on 27.11.2009
Opening of commercial bids	To be intimated to the short-listed Bidders.

Contact Address:
Punjab Police Housing Corporation
SCO 171-72, Sector 8-C, Chandigarh.
Email : md.pphc@yahoo.com

CHAPTER – 1

INSTRUCTIONS TO BIDDERS

1. GENERAL

- 1.1 Bids are invited from the established, reputed and experienced IT companies for the supply of equipment and services for the introduction of GIS/GPS based Automatic Vehicle Tracking System (AVTS) including ACD (Automatic Call Distribution) for optimization of patrol van management (hereinafter referred to interchangeably as the “**System**” or the “**Goods**” or the “**Equipment**” or the “**Items**” or the “**Stores**”) as per the Schedule of Requirement (**Chapter-3**) and Technical Specifications (**Chapter-4 and Chapter-5**) in this document and any other item required for the completion of the project exclusively on Turnkey basis for 6 Cities of Punjab (Ludhiana, Bhatinda, Jalandhar, Amritsar, Patiala & Mohali) and PPHQ, Chandigarh.
- 1.2 The Bidders are advised to study the tender document thoroughly. Submission of tender shall be deemed to have been done after careful study and examination of the tender document with full understanding of its implications.
- 1.3 The **Scope of Work** shall include supply, delivery at sites, unloading, any other services associated with the delivery of equipment and materials, installation, commissioning, software optimization, digital maps of concern areas, providing warranty/ post warranty services for the Stores/ Equipment, identifying communication Service Provider & getting suitable data channels on rental basis and any other related accessories/services for the complete installation and commissioning of the System at PCR of respective 6 cities and PPHQ, Chandigarh, as per the Schedule of Requirements (**Chapter-3**) and Technical Specifications (**Chapter-4 & 5**). The successful bidder shall assume full responsibility of the complete System until final acceptance. The successful bidder shall also ensure integration of the system being installed with the existing services of users or service providers.
- 1.4 It will be the responsibility of the bidder to ensure overall integration of the system being installed with the existing system, with the services being offered by service provider etc. Acceptance will be given after the complete system integration is workable as per the specifications of the tender.
- 1.5 The proposed Automatic Vehicle Tracking System may be divided into three Sub-systems viz., Control Room Sub-System, Vehicle Sub-system and Communication Sub-System. Control Room Sub-System, Vehicle Sub-system and GPRS based Communication Sub-system will be procured outright Network services to be used for Communication Sub-system will be on rental basis. It is the responsibility of the Bidders to tie-up with the Service Providers for GPRS connectivity and quote for the same in their bids.
- 1.6 It will be imperative on each bidder to fully acquaint himself with all the local conditions and factors which would have any effect on the performance of the contract and cost of

- the Stores. No request for the change of price or time schedule of delivery of Stores shall be entertained, on account of any local condition or factor once the offer is accepted by the Purchaser.
- 1.7 Bidders shall not be permitted to alter or modify their bids after expiry of the deadline for receipt of bids.
 - 1.8 The purchase committee reserves the right to relax any tender term/ condition in larger public interest with the approval of competent authority.

2. ELIGIBILITY CRITERIA

- 2.1 The Company should be established, reputed National and / or International IT Companies with base in India.
- 2.2 The annual turnover of the Company should not have been less than Rs. 50 Crores on an average during each of the last three years.
- 2.3 The Company must be well established and have been providing IT solutions for at least 3 years.
- 2.4 The Company must be CMMi Level 5 in the field of Software Development.
- 2.5 The Company must be ISO 9001:2000 certification in the field of GIS/Mapping being Digital Map a important component of the Project.
- 2.6 The Company must have executed one Large Scale Mapping GIS project for Urban/Municipality in last three years worth of Rs. 20 Lacs.
- 2.7 The Company should have at least one technical maintenance and support office in Mohali/Chandigarh. If not, company shall open its office in these places, if selected through tender process.
- 2.8 The Company should have sufficient(min 50) technical skilled manpower having requisite experience to develop and implement customized IT applications integrating GPS, GIS and Web technologies.
- 2.9 The Company should have executed at least one integrated project involving Hardware, Networking, GPRS based AVTS and Application Software Development of value not less than Rs. One crore in the last three years period nationally.
- 2.10 The Company should have proven experience in the field of development of customized applications integrating GPS& GIS technologies .
- 2.11 The bidder shall furnish the certificate and details of its eligibility required under this Clause-2 in the prescribed format at **Annexure T-4**.

3. SCHEDULE OF TENDER:

- 3.1 The tender document can be obtained at the cost of Rs. 500/- from the office of the Punjab Police Housing Corporation, SCO 171-72, Sector 8-C, Chandigarh - 160018 on any working day between **10 a.m. to 5 P.M from 3.11.2009 to 26.11.2009.**
- 3.2 The tender document can also be downloaded from the websites of Punjab Police at <http://www.punjabpoliceindia.org> and Punjab Police Housing Corporation website i.e www.pphcl.org.
- 3.3 In both the cases, a non-refundable Tender Fee of Rs.500 shall be enclosed with the technical bid in the form of demand draft/ banker's Cheque/ Pay Order in favor of Managing Director, Punjab Police Housing Corporation payable at Chandigarh. Failure to do so will result in the rejection of the bid.
- 3.4 The sealed bids will be accepted till 1400 hrs. on 27.11.2009. The sealed bids can be put personally in the Tender Box kept at Punjab Police Housing Corporation, SCO 171-72, Sector-8-C, Chandigarh. Alternatively, the bids may be sent by Registered Post addressed to the Managing Director, Punjab Police Housing Corporation, SCO 171-72, Sector-8-C, Chandigarh.
- 3.5 The Technical bids will be opened at **1430 hrs. on 27.11.2009** in the Conference Room, Punjab Police Housing Corporation, SCO 171-72, Sector-8-C, Chandigarh. The bidders or their authorized representatives may be present, if they so desire.
- 3.6 The bidders shall arrange presentation and demonstration of the AVTS System during the period from **16.11.2009 to 26.11.2009** at PPHC to show that their quoted System fully conforms to this tender. The bidders will be intimated the exact date and time slot for them to carry out such presentation and demonstration within the above specified time period.
- 3.7 The bidders are advised to make all necessary arrangement for the presentation and the live demonstration of their quoted system well in advance as they will be required to adhere to the time schedule given to them soon after the bid opening.
- 3.8 The live demonstration/ field visit of the quoted system is a mandatory requirement and shall be demonstrated on one working site with Similar Solution or on live data with following:
- (i) Integration of the quoted system with a Digital Map.
 - (ii) AVTS capabilities by installing vehicle sub-system on at least three vehicles,
 - (iii) Call center capabilities,
 - (iv) Dispatcher capabilities,
 - (v) System configuration & capabilities and
 - (i) The quoted GPRS based communication system performance and capabilities specifically the transmission of vehicle position updates with in the required time period.

(ii) ACD Integration with System .

3.9 Evaluation of the Technical proposal shall be independent of the financial proposal.

3.10 The number of points to be given under evaluation criteria are:

S.No	Description	Points
1	Specific experience of the bidder related to the Assignment <ul style="list-style-type: none"> • Man-years experience as Integrated Solutions Provider including Software, Hardware/Networking and Training • Similar projects (GIS; MIS) undertaken in the country with Police Departments and other State/Central Government Deptts. • No of GIS, MIS, Database experts and their total man-years experience • Local presence of the bidder at Chandigarh/Mohali and the nature of work experience of the local office. • Feedback from the live demonstration and work site visit. 	40
2	Adequacy of the proposed Work Plan and Methodology in responding to TOR. <ul style="list-style-type: none"> • Suitability of proposed software, hardware and networking solutions with reference to the conditions specified in TOR 	25
3	Qualification and competence of the Key staff for the assignment <ul style="list-style-type: none"> • Qualifications, competence and hands-on experience of the Team Leader in execution and co-ordination of such projects. • Profile and Experience of Key Staff in man years on similar GIS and MIS/DSS projects • Extent of on-site commitment/ engagement of the key staff for the project • Certification of MCSE/MCSD/CCNA/CCIE of team members. 	25
4	Suitability of the Work Plan, methodology, proposals and earlier experience in Training and Capacity Building for seamless transfer of knowledge	10
	Total Points	100

3.11 The minimum technical score (TS) required to qualify is 70 Points.

3.12 After demonstration and evaluation of the Technical bids, the short-listed Bidders will be intimated. The list of short listed Bidders will also be put on the department's website. The decision of the committee on technical suitability of the offer shall be final and shall not be open for discussion.

3.13 The Commercial bids of the short-listed Bidders will be opened in the Conference Room, Punjab Police Housing Corporation, SCO 171-72, Sector-8-C, Chandigarh and such short-listed bidders will be intimated about the date and time accordingly. The short-listed bidders or their authorized representatives may present, if they so desire.

- 3.14 Purchaser 'right to vary quantities at the time of placement of Supply Order/signing of Contract: The Purchaser reserves the right to vary the quantities and/or split the order among the selected Bidders.

4. PURCHASER'S RIGHT TO ACCEPT ANY BID AND TO REJECT ANY OR ALL BIDS

The Purchaser reserves the right to accept any bid, and to annul the bid process and reject all bids at any time, without assigning any reason, prior to placement of supply order/ signing of contract, without thereby incurring any liability to the affected Bidder(s) or any obligation to inform the affected Bidder(s) of the grounds for the Purchaser's action.

5. BID SECURITY (EARNEST MONEY)

- 3.15 5.1 Bid Security (Earnest Money) amounting to **Rupees Fifteen Lakh only** in the form of Account Payee Demand Draft, Fixed Deposit Receipt, Banker's Cheque or Bank Guarantee, from any of the commercial banks, in favor of Managing Director, Punjab Police Housing Corporation, payable at Chandigarh should be enclosed along with the Technical Bid. Failure to do so will result in the rejection of the bid.
- 5.2 The bidders registered with Central Purchase Organization (e.g. DGS&D), National Small Industries Corporation (NSIC) may be exempted from depositing of Earnest Money. The bidders shall have to enclose documentary proof to authenticate their firm's registration with these organizations for the specific items to avail this exemption.
- 5.3 The Bid Security (Earnest Money) shall be valid for a period of six calendar months from the date of opening of the Bid by the Purchaser, No interest will be payable by the Purchaser on this amount.
- 5.4 The Bid Security (Earnest Money) may be forfeited:
- a) if a Bidder withdraws his bid during the period of bid validity ; or
 - b) in the case of the finally selected Bidder, if the Bidder fails;
 - i) to sign the Contract in accordance Clause 1 of Chapter-2; or
 - ii) to furnish Contract Performance Security in accordance with Clause 2 of Chapter-2; or
 - iii) if at any stage any of the information/ declaration is found false.
- 5.5 Bid Security (Earnest Money) in respect of the finally selected Bidder will be discharged upon the Bidder signing the Contract, pursuant to Clause 1 of Chapter-2 and furnishing the Performance Guarantee, pursuant to Clause 2 of Chapter-2.

6. PERIOD OF VALIDITY OF BIDS

Bids shall remain valid for **4 (Four) calendar months** from the date of Bid opening. A bid valid for a shorter period may be rejected by the Purchaser as non-responsive.

7. REGISTRATION WITH SALES TAX DEPARTMENT

The bidders should have their firm registered with the Sales Tax Department, with respect to Sales Tax/ VAT and shall furnish copies of the same with their Technical Bid along with their latest Sales Tax/ VAT Clearance Certificates from the concerned department as per the enclosed Performa at **Annexure-T5 of Chapter-7**.

8. TERMS AND CONDITIONS OF TENDERING FIRMS

- 8.1 Printed terms and conditions of the Bidders shall not be considered as forming part of their Bids.
- 8.2 Bidder must state categorically whether or not his offer conforms to all the tender terms and conditions. If there is a variation in any of the terms and conditions, the extent of variation and the reasons thereof shall be clearly mentioned in the technical bid.
- 8.3 Bidder must state categorically whether or not his offer conforms to the specifications given in Chapter 4 of the tender.

9. BID REQUIREMENTS

- 9.1 The Bidder shall quote for the items and quantities as listed under the Schedule of Requirements (**Chapter-3**) in the Price Schedule format (**Chapter-6**) clearly giving the nomenclature, make & model no. of the quoted items. The same shall be enclosed un-priced in the technical bid and priced in the commercial bid.
- 9.2 The Successful Bidder(s) shall be required to furnish **Contract Performance Bank Guarantee for 10%** of the Contract Price, at the time of award of Contract as per the prescribed Performa (**Annexure-C2 of Chapter 7 & Clause 2 of Chapter 2**).
- 9.3 All the bidders participating in the tender must submit a list of their owners, partners, etc. and a certificate to the effect that the firm is neither blacklisted by any Government Department nor any Criminal Case is registered against the firm or its owner or partners or directors anywhere in India.
- 9.4 Bids not accompanied by prescribed Tender Fee or Bid Security will be rejected.
- 9.5 Conditional bids, Telex/Fax bids and incomplete bids will be summarily rejected.
- 9.6 The bid shall contain no interlineations, erasures or overwriting and all pages of the Bid must be signed and sequentially numbered by the Bidder.
- 9.10 It must be ensured by the bidders that all columns of price schedule are completely and properly filled. If any column of the price bid is found blank the price bid shall be treated as incomplete and unresponsive and price bid shall not be considered and summarily rejected. No clarification whatsoever shall be entertained after opening of the price bid.

- 9.11 The AMC rates for the first two years will be considered as a loading factor and criterion for deciding the lowest bidder.

10. BID PRICES

- 10.1 The Bidder shall indicate on the Price Schedule (**Chapter - 6**) attached to this document the Unit Prices and total Prices of the Stores it proposes to supply under this tender in the following manner:

- i) Unit price for each Item in Indian Rupees
- ii) Sales Tax/ VAT in Indian Rupees.
- iii) Other Govt. levies, if any (To be specified).
- iv) Incidental charges, if any (To be specified).
- v) Unit Price, FOR Destination including all taxes.
- vi) Extended Price, FOR Destination in Indian Rupees.
- vii) AMC Rates for both Equipment and Software

- 10.2 The following totals will also be indicated in the Price Schedule (Station wise and total Project cost).

i)	Total Cost of Outright Purchase component (Item 1, 2, 3.1, 3.2, 3.3, 4, 5 of schedule of requirement)
ii)	Annual rates and Total 3 years Cost of Rental component (Item 3.4 & 3.5 of schedule of requirement)
iii)	AMC rates and Total Cost of AMC for the Hardware and Software for two Years after warranty
iv)	The Total Project Cost including System, 3 years rental & 3 years warranty components

- 10.3 The price should be quoted strictly in line with the price schedule leaving no column blank whatsoever to avoid ambiguity and disqualification.
- 10.4 It should be noted that payment towards other Govt. levies/ incidental charges, if any, would be made by the Purchaser at actual against documentary proof submitted by the Supplier. The Purchaser would provide appropriate Sales Tax forms applicable to the purchases made on behalf of Government of India.
- 10.5 The Purchaser will make all payments, under this contract, in Indian rupees.

11. CONTENTS OF BID

The Bids prepared by the Bidder shall comprise of the following two components:-

- a) **Technical Bid** comprising of the following and to be filled on the format sheets provided in the Tender Document. This is mandatory:
 - i) Bidders Particulars (**Annexure T1, Chapter 7**)
 - ii) Bid Form (**Annexure T2, Chapter 7**)
 - iii) Technical Specifications of the Stores (**Chapter 4 and Chapter 5**)

- iv) Warranty (**Annexure T3, Chapter 7**)
- v) A Demand Draft/Pay Order for Rs.15,00,000.00 (Rupees Fifteen Lakh only) in the form of Account Payee Demand Draft, Fixed Deposit Receipt, Banker's Cheque or Bank Guarantee from a scheduled Bank in favour of Managing Director, Punjab Police Housing Corporation, Chandigarh. (**Clause 6 of Chapter 1**).
- vi) Tender fee of Rs.500/- in form of D.D./Pay Order/Banker Cheque (Chapter-1)
- vii) All technical brochures/documents relevant to the Bid
- viii) Company details for eligibility criterion in the format as at Annexure T-4.
- ix) Copies of ST/VAT Regn. & Clearance Certificates as per enclosed proforma at Annexure T-5 (**Clause 8, Chapter 1**)
- x) Certificate as per clause 11.3 of **Chapter 1**
- xi) Check List of Technical Bid (**Annexure T6, Chapter 7**)
- b) **Commercial Bid** comprising of the following and to be filled in accordance with the formats provided in the Tender Document:
 - i) Bid Letter (**Annexure C 1, Chapter 7**)
 - ii) Price Schedule (**Chapter - 6**)
 - iii) Proforma for Bank Guarantee for Contract Performance (**Annexure C2, Chapter 7**)
 - iv) Schedule of Requirements (**Chapter 3**)
 - v) Check List of Commercial Bid (**Annexure C3, Chapter - 7**)

12. PROCEDURE FOR SUBMISSION OF BIDS

- 12.1 Pre-bid Meeting will be held with prospective bidders for inviting clarifications/ queries on the Bid /Request For Proposal (RFP) document. After the Pre-bid meeting, clarification, corrigendum will be issued for submission of Bid document by the Bidder.
- 12.2 It is proposed to have a **Two-Cover System** for this tender.
 - a) Technical Bid in one cover super scribing "**Technical Bid, Tender Number and date of opening**". Please note that prices should not be indicated in the Technical Bid.
 - b) Commercial Bid in one cover super scribing "**Commercial Bid and Tender Number**".
- 12.3 Both the Technical Bid cover and Commercial Bid Cover prepared as above are to be kept in a single sealed cover super scribed with **Tender No. and date of opening**.
- 12.4 All the covers should also indicate clearly the **name and address of the Bidder**.

CHAPTER – 2
CONDITIONS OF CONTRACT

1. AWARD OF CONTRACT:

- 1.1 Prior to the expiry of the period of bid validity, the Purchaser will notify the finally selected Bidder and place the supply order. If a need for extension of the bid validity period arises, it should be extended by mutual agreement. The notification of award/placement of supply order will constitute the formation of the Contract.
- 1.2 At the time of placement of the supply order, the finally selected Bidder shall sign the contract with the Purchaser. The finally selected bidder shall bring along with him, the power of attorney, the contract performance bank guarantee and common seal etc. for signing the contract.
- 1.3 A tripartite “Service Level Agreement” (SLA) towards the rental services of the GPRS based Communication Sub-system will be a part of the contract. The finally selected Bidder, the Service Provider and PPHC for Punjab Police will be parties to the SLA.

2. CONTRACT PERFORMANCE BANK GUARANTEE:

- 2.1 At the time of signing the contract, the Supplier shall furnish a **Contract Performance Bank Guarantee for 10 percent of the value** of the Contract price, as per the prescribed Performa (**Annexure C-2, Chapter 7**), from a Scheduled Bank.
- 3.16 The Contract Performance Bank Guarantee will be in the name of the Managing Director, Punjab Police Housing Corporation, SCO 171-72, Sector-8-C, Chandigarh.
- 2.3 The Contract Performance Bank Guarantee should be valid for a period of **3 (three) years and 6 (Six) months** from the date of award of the Contract. This will be released after the successful completion of warranty period.
- 2.4 In the event of delay in acceptance of the Stores, the Supplier shall, at the request of the Purchaser, extend the validity of the Contract Performance Bank Guarantee so as to cover the warranty period.

3. PAYMENT SCHEDULE:

The standard payment terms subject to recoveries, if any, under the Liquidated Damages clause will be as follows: -

- 3.1 **Delivery of Stores:** The Supplier shall notify the Purchaser about the delivery of the Stores to the Delivery Site one week in advance of the expected date of partial or complete delivery.
- 3.2 **Transfer of Title:** Upon each partial delivery of the Stores at the Purchaser’s delivery site, an inventory of the Stores shall be taken jointly by the Supplier and the Purchaser to be completed within five (5) working days of such delivery to ensure that the supply is complete and in order. After the inventory of each partial delivery of the Stores has been completed to the entire satisfaction of the Purchaser, the title of those Stores will

- transfer to the Purchaser. In the event of short shipment or damage to the Stores inventories, the title of only those items of Stores that are in order will transfer to the Purchaser.
- 3.3 The Supplier shall ensure that its representatives are present for the inventorisation of the Stores supplied under the contract failing which the Purchaser shall proceed with the inventorisation in the Supplier's absence and the Purchaser's inventorisation report shall be binding on the Supplier.
- 3.4 **First payment:** The Purchaser shall pay, to the Supplier, **sixty percent (60%) cost** of the Stores, title of which has been transferred to the Purchaser, and applicable VAT amount as First Payment", within thirty (30) working days from the date of transfer of title of the Stores and receipt of supplier's bill complete in all respects.
- 3.5 **Final payment:** The Purchaser shall pay, to the Supplier, the balance amount and VAT/Service Tax amount as "Final Payment" within thirty (30) working days from the Final Acceptance of the system and receipt of Supplier's bill complete in all respects.
- 3.6 **Rental Payment:** The Rental Payment towards GPRS based Communication Sub-system will be made periodically after availing the satisfactory services. The period may be quarterly.
- 3.7 No advance payment shall be made.
- 3.8 The Client reserves the right to conduct Third Party Inspection (TPI) for infrastructure and operations including security audit

4. PACKING, FORWARDING & SHIPMENT:

The Supplier shall provide proper packing of the Stores to prevent their damage or deterioration during transit to the final destination site. The Supplier shall notify Purchaser of the date of each shipment from his works and the expected date of arrival of goods at the site.

5. DELIVERY, INSTALLATION AND COMMISSIONING

Delivery of the Stores at Punjab Police premises shall be completed by the Supplier in accordance with the terms specified by the Purchaser within **04 (four) weeks** from the date of Award of Contract. The installation, testing, commissioning and overall integration of the proposed system shall be completed within a period of **04 (four) weeks** after the delivery of the Stores at Punjab Police premises or with in a period of **8 (Eight) weeks** from the date of award of contract.

6. INSURANCE

The Goods supplied under the Contract shall be fully insured on a warehouse-to-warehouse basis by the Supplier against loss or damage incidental to manufacture or acquisition, transportation, storage and delivery.

7. INSPECTION AND TESTS

- 7.1 The Purchaser shall have the **right to inspect** and/or test the **Stores** for conformity to the Contract Specifications.
- 7.2 The purchaser can also inspect or test the equipment before dispatch at OEMs location
- 7.3 Should any inspected or tested Stores fail to conform to the specifications, the Purchaser may reject them and the Supplier shall either replace the rejected Stores or make all alterations necessary to meet specification requirements free of cost to the Purchaser.
- 7.4 The Supplier shall provide installation and standard test procedures for the individual equipment and for the complete System offered.
- 7.5 The Supplier shall test individual equipment and the complete System after installation at site. The Supplier shall submit complete documentation of all the measurements conducted during installation period for future reference of the Purchaser.
- 7.6 A document comprising of the technical problems faced during installation, testing and commissioning period and their solutions shall be submitted by the Supplier at the time of handing over the completed works to SSP, Mohali, Punjab Police.
- 7.7 For the purpose of taking over the Stores/system supplied, an **Acceptance Test** shall be carried out at the Purchaser destination site. The equipment that meets the acceptance test shall only be accepted by the Purchaser. Acceptance test procedure will be prepared by the vendor and it shall be duly got approved from the purchaser.
- 7.8 The supplier shall provide technical specifications cross reference matrix stating verified and tested at stage and remarks before final acceptance of the system as per Performa T-7.
- 7.9 The installation or commissioning after overall integration shall not be deemed to have been completed unless all the Stores and System are accepted by the Purchaser.
- 7.10 Before the equipment is taken over by the Purchaser, the Supplier shall supply installation, operation, repair and maintenance manuals of the equipment/system. This shall include the i) System Interface Drawings, ii) System Interconnection and Block Diagrams, iii) User Operation Manuals & iv) Equipment Maintenance Manuals

8. GUARANTEE/ WARRANTY

- 8.1 The Supplier shall provide comprehensive on-site **Guarantee/ Warranty** for all Stores/equipment supplied under the Contract at least for a period of 3 (**Three**) years **from the date of final acceptance of the System.**
- 8.2 The Supplier must have a maintenance base in Chandigarh/Mohali to provide maintenance service, of the System being offered, efficiently and promptly
- 8.3 If the performance of any individual equipment or System fails to meet the contract specifications then the same shall be replaced by the Supplier free of cost during the term of the warranty/guarantee period.
- 8.4 The Supplier shall provide necessary Software updation free of cost during the warranty/guarantee period.
- 8.5 The maintenance services, including spares shall be **free of cost** during the warranty/guarantee period.
- 8.6 During the term of warranty/guarantee the service/repair calls will have to be attended by the Supplier **within two hours** from the time of such calls. The defective card/item/equipment/software should be repaired on the same day at Purchaser's location. In case of major defects requiring the defective card/item/equipment to be taken to the Supplier's workshop, it should be returned within six weeks duly repaired and an immediate substitute card/item/equipment will be provided by the Supplier for the smooth operation of the System. The to and fro transportation of the card/item/equipment will be the responsibility of Supplier.
- 8.7 Apart from the service/repair calls, the service engineer deputed by the Supplier will visit the site once every month to assess the serviceability of the System and thrice in a year to carryout the Preventive Maintenance and diagnostics of the system during the Warranty Period.
- 8.8 Delays in attending the calls and or repairing the defective card/item/equipment beyond time limit specified in this Clause, without providing the substitute, will attract penalties in accordance with **Clause 14.**
- 8.9 If the Supplier fails to repair or replace the defective Equipment/ Item, the Purchaser will be free to get the same repaired/replaced from the market and its cost will be adjusted from the Supplier's Contract Performance Bank Guarantee or recovered from the Supplier.
- 8.10 The vendor must ensure the security of entire voice / data communication routed through service provider. **The security will be one of the main considerations and hence the vendor must ensure that the infrastructure used should be specifically reserved and should not be used for the public communication. Special care must be taken in this regard. All voice and data communication in the system should be in an encrypted form with provisions of string authentication mechanisms.**

9. POST-WARRANTY SERVICES AND MAINTENANCE

- 9.1 The Supplier shall be responsible for the comprehensive on-site maintenance of the entire System including both hardware and software, at a reasonable price, for a minimum period of seven years after expiry of the warranty/guarantee period assuming the life span of the System to be 10 years. The bidder shall indicate the estimated life span of the quoted System.
- 9.2 The Supplier shall quote the rates for comprehensive Annual Maintenance of the entire System including both hardware and software in the Price Schedule (**Chapter-6**) for the first two years after expiry of the warranty/guarantee period of three years. Rates for the AMC for the subsequent years i.e. after five years will be taken afresh. AMC rates will include rates for maintenance of both hardware and software. Rate for system up gradation if required should be mentioned separately in the AMC . The purchaser will have the option to either accept or reject the AMC after the expiry of the warranty period.
- 9.3 The AMC rates for the first two years will be considered as a loading factor and criterion for deciding the lowest bidder.
- 9.4 The payment towards AMC shall be payable periodically after successful completion of the maintenance service during that period, the period being not more than six months.
- 9.5 Under the AMC, the Supplier shall provide comprehensive maintenance services of the entire System including the spares and there shall be no hidden cost.
- 9.6 Preventive maintenance service of the System under AMC must be carried out once in three months.
- 9.7 During the period of AMC, the service/repair calls are to be attended by the Supplier **within two hours** from the time of such calls. The defective card/item/equipment/software should be repaired the same day at Purchaser's location. In case of major defects requiring the defective card/item/equipment/software to be taken to the Supplier's workshop, it should be returned within, six weeks duly repaired and immediate substitute card/item/equipment will be provided by the Supplier for the smooth operation of the System. The substituted card/item/equipment should either be of equivalent specifications or higher. The to and fro transportation of the card/item/equipment will be the responsibility of Supplier. Vendor can make Modifications in hardware and software during maintenance however not at the cost of qualitative and quantitative performance of overall system
- 9.8 Delays in attending the calls and or repairing the defective equipment beyond time limit given in this Clause, without providing the substitute, will attract penalties. AMC charges of the delayed period will not be paid if the delay is more than **6 hours** from the specified time limit.
- 9.9 If the Supplier fails to perform any of the Services of the Contract within the time period specified in the tender, the Purchaser shall, without prejudice to its other

remedies under the tender, deduct from the Contract Performance Bank Guarantee, by way of penalty, a sum equivalent to One (1) percent of the price of the AMC rates for each and every week (part of a week being treated as full week) of delay until actual performance.

- 9.10 If the Supplier fails to repair or replace the defective card/item, the Purchaser will be free to get the same repaired/replaced from the market and its cost will be adjusted from the Supplier's pending bills/Security deposit or recovered from the Supplier.
- 9.11 The Supplier shall not retract from the responsibilities under the AMC Contract once the Contract is signed. However, in the unlikely case of violation, the Purchaser will be at liberty to forfeit the Contract Performance Bank Guarantee and make recoveries from the firm besides initiating legal proceedings against the firm.
- 9.12 The Purchaser shall also have the right to decide whether or not to enter into the maintenance agreement with the Supplier.

10. TRAINING

- 10.1 The scope of work envisages that the Bidder shall undertake to train communication engineers and other staff nominated by Punjab police in different aspects of equipment design, functioning, field installation, testing, commissioning, system management, operation & administration, maintenance and repair.
- 10.2 The supplier shall at every stage of installation; testing and commissioning provide all facilities for adequate training of Punjab Police personnel who may be deputed to work on the project.
- 10.3 The system Administration and Maintenance Training program, at the user's location, will be structured so as to train 5 of the Punjab Police personnel deputed for the purpose.
- 10.4 The user operational training program, at the user's location, will be structured so as to train up to 10 of the purchaser's supervisory and training personnel who will, in turn, train individual operators.
- 10.5 The maintenance training program, at the manufacturer's location, will be structured to train up to 1 engineers and 3 experienced technicians in the complete trouble shooting and maintenance of the equipment to both the board replacement and board repair level.
- 10.6 Bidder will provide complete details on the training programs to be offered including:
 - (a) Material to be covered
 - (b) Number of hours of training per operator or technician for each specific course
 - (c) Supporting documentation to be provided

11. SPARE PARTS

- 11.1 The Bidder will undertake that supplies of necessary maintenance equipment and spare parts will be made available for all Items/Equipment and the complete System for a period of 10 (Ten) years on a continuing basis and life time spares after 10 years.
- 11.2 The Bidder shall include in his tender, the break-up of essential spares required for efficient maintenance of the supplied System in **Annexure-C3, Chapter-7** and quote their price in **Chapter-6**.

12. SITE PREPARATION

- 12.1 The site for installation of the System shall be provided by the Purchaser as per the required environmental conditions before the installation of the system.
- 12.2 The Supplier shall provide site plan and equipment layout plan for the System.
- 12.3 The complete installation of the System at the Purchaser's site shall be the responsibility of the Supplier.
- 12.4 The Control Room Sub-system is to be installed in Police Control Room of 6 cities and PPHQ, Building, Sector 9, Chandigarh.
- 12.5 Earthing arrangements for all the Equipment shall be the responsibility of the Police and to be carried out as per standard procedures laid by supplier.

13. RESPONSIBILITY OF COMPLETION & SOFTWARE OPTIMIZATION

- 13.1 Any fittings or items which may not be specially mentioned in the specifications but which are necessary are to be provided by the Supplier without any extra charge for completeness of the work under this Tender.
- 13.2 The System software and user interactive windows shall be configured after carrying out thorough study of the operations at PCR. Thereafter these will be further optimized after installation based on the feedback from the actual users over a period of six months.

14. DELAY IN THE SUPPLIERS PERFORMANCE

- 14.1 Delivery of the Goods and performance of Services including Warranty and Post Warranty Services shall be made by the Supplier in accordance with the time schedule specified by the Purchaser. Delay by the Supplier in the performance of its Delivery or Service obligations shall render the Supplier liable to imposition of Liquidated Damages in accordance with **clause-15** below and thereafter, upon reaching the

maximum deduction set out therein, to termination for default in accordance with **Clause-22** below accompanied by forfeiture of Bank Guarantee.

- 14.2 If the bidder fails to complete the work within the stipulated period, the Purchaser reserves the right to get the work completed from open market and difference of bill, if any, will be recovered from the bills of the bidder.
- 14.3 If the contractor shall desire an extension of the time for completion of the work on the grounds of his having been unavoidably hindered in its execution or any other ground he shall apply in writing to the Managing Director, Punjab Police Housing Corporation, Chandigarh within 30 days of the date of hindrance but before the expiry of time limit on account of which he desires such extension as aforesaid and the Managing Director, Punjab Police Housing Corporation, will, if in his opinion (which shall be final) reasonable grounds be shown therefore, authorize such extension of time, if any, as may in his opinion be necessary or proper.

15. LIQUIDATED DAMAGES

If the Supplier fails to deliver any or all of the Goods or perform the Services within the time period specified in the Contract, the Purchaser shall, without prejudice to its other remedies under the Contract, deduct from the Contract Price, as liquidated damages, (not by way of penalty) a sum equivalent to 1(one) percent of the price of the delayed goods or unperformed service for each & every week (part of a week being treated as a full week) of delay until actual delivery or performance, up to a maximum deduction of 05% (Five Percent) of the undelivered Equipment/Services. The overall system will be rejected if any of the items/goods/software etc. which are essentially required as an integral part of defined system to perform the defined specifications/interface/objective functions are not achieved

16. FORCE MAJEURE

The Contractor shall not be liable for forfeiture of its performance security, liquidated damages or termination for default, if the delay in performance or other failure to perform its obligations under the contract is a result of an event of Force Majeure. For purposes of the clause, "Force Majeure" means an event beyond the control of the Contractor and not involving the Contractor's fault or negligence and not foreseeable. Such events may include wars or revolutions, fires, floods, epidemics, quarantine restrictions, freight embargoes etc.

17. PATENT INDEMNIFICATION

The Supplier shall indemnify the Purchaser against all third party claims of infringement of patent, copyright, trademark, license or industrial design rights, software piracy arising from use of the goods or any part thereof in the Purchaser's country.

18. WAIVER

Failure or delay on the part of the Supplier or the Purchaser to exercise right or power hereunder shall not operate as a waiver thereof.

19. ASSIGN ABILITY

Neither this Contract nor any rights under it may be assigned by either Party without the express prior written consent of the other Party. However, upon assignment of the assignor's interest in this Contract, the assignor shall be released and discharged from its obligations hereunder only to the extent that such obligations are assumed by the assignee.

20. SEVER ABILITY

If any portion of this Contract or any of the Contract Documents hereto is held to be invalid, such provision shall be considered severable, and the remainder of this Contract hereof shall not be affected.

21. GOVERNING LAW

This Contract including the Contract Documents shall be governed by and construed in accordance with the laws of India and the Courts in Punjab shall have jurisdiction in this regard.

22. TERMINATION FOR DEFAULT

- 22.1 The Purchaser may without prejudice to any other remedy for breach of Contract, by Thirty (30) days written notice of default sent to the Supplier and upon the Supplier's failure and neglect to propose and/or execute any corrective action to cure the default, terminate this Contract in whole or in part:
- (i) If the Supplier fails to deliver any or all of the Stores within the time period(s) specified in the Contract; or
 - (ii) If the Supplier fails to perform any other obligation(s) under the Contract.
- 22.2 On termination of the Contract for default, the security deposit of the Supplier will be forfeited.
- 22.3 On termination of the Contract for default, action will be taken to black list the Supplier.

23. TERMINATION FOR INSOLVENCY

The Purchaser may at any time terminate the Contract by giving written notice to the Supplier, without compensation to the Supplier, if the Supplier becomes bankrupt or

otherwise insolvent, provided that such termination will not prejudice or affect any right of action or remedy which has accrued or will accrue thereafter to the Purchaser.

24. TERMINATION FOR CONVENIENCE

- 24.1 The Purchaser shall have the right to terminate the Contract in whole or in part at any time for its convenience. The notice of termination shall specify that termination is for the Purchaser's convenience, the extent to which performance of work under the contract is terminated and the date upon which such termination becomes effective.
- 24.2 The Goods those are complete and ready for shipment within Ninety (90) days after the Supplier's receipt of notice of termination shall be purchased by the Purchaser at the Contract terms and prices. For the remaining Goods the Purchaser may elect:
- (a) to have any portion completed and delivered at the Contract terms of prices, and/or
 - (b) to cancel the remainder and pay to the Supplier an agreed amount for partially completed Goods and for materials and parts previously procured by the Supplier.

25. RESOLUTION OF DISPUTES

In the case of dispute or difference arising between the Purchaser and the Supplier relating to any matter connected with this contract, the same shall be settled through amicable negotiations between a maximum of Two (2) officers nominated by the Director General of Police, Punjab Police Chandigarh and Two (2) employees nominated by the Supplier, failing which, the dispute shall be submitted to arbitration in accordance with the provisions of the Arbitration and Conciliation Act, and the Arbitrator's decision shall be final & binding. The language of arbitration shall be English. The venue of the conciliation and/or arbitration proceedings shall be in Chandigarh, India.

CHAPTER – 3**Schedule of Requirement for Mohali, Ludhiana, Patiala, Jalandhar, Amritsar and Bathinda**

S.No	Item details	Quantity
1	HARDWARE	
1.1	i. EPBAX System with Automatic Call Distribution (ACD)	01- for each location
	ii. Digital telephones instruments for supervisors and operators	15- for each location
	iii. Head sets for Call Takers and dispatchers	15- for each location
	iv. ISDN PRI Modem	1 pair - for each location
	v. ISDN PRI CARD for connecting one ISDN PRI line from BSNL	01 - for each location
1.2.	Fault Tolerant RAID configured Server(s) for. Hardware to be quoted by the firms should be of MNC brand. <ul style="list-style-type: none"> • Application & Database, • AVTS application, • ACD(Automatic Call Distribution) & CTI (Computer Telephone Integrity) • Application server at PPHQ • Firewall with Intrusion Detection and Prevention system for unified threat mitigation along with VPN support 	4+1 for Mohali and 3+1 for other locations.
	16(Digital)+4(Analog) Channel voice Logging system with for recording the conversation of call received at 100 No and communication between dispatcher and PCRs through VHF sets.	1Nos - for each location
1.3	PA-100 Call Taker Operator Workstations.	5 - for each location
1.4	Dispatch Wireless Operator Workstations.	4 - for each location
1.5	PA-100 Supervisor /Administrator Workstations.	1 - for each location
1.6	Administrator GIS Workstation at PPHQ.	1- for each location
1.7	Heavy Duty Laser Printer A-3 with 18 ppm, 64MB RAM, 65000Pages per month duty cycle,1200x1200 dpi Resolution and Ethernet port and Parallel, USB Ports of MNC Brand	1 - for each location

1.9	10 KVA (N+1 Redundant) online UPS with minimum 1-hours backup	1 - for each location																												
	2KVA (N+1 Redundant) online UPS with minimum 1-hours backup at PPHQ	1																												
1.10	Heavy Duty LCD Projector, 5' x 5' Motorized Projection Screen with remote control (2500 lumens (DLP) or higher; resolution: True-XGA; Contrast ratio:2000:1	1 - for each location																												
	Heavy Duty LCD Projector, 5' x 5' Motorized Projection Screen with remote control (2500 lumens (DLP) or higher; resolution: True-XGA; Contrast ratio:2000:1 at PPHQ Chd	1																												
1.11	All Networking Components of MNC Brand	Lot - for each location																												
1.12	Vehicle Sub-System including GPS Receiver, MDT (Mobile Data Terminal)), Modem etc <table border="1" style="margin-left: 20px;"> <thead> <tr> <th>District</th> <th>Gypsys</th> <th>Motor Cycles</th> <th>Total</th> </tr> </thead> <tbody> <tr> <td>Amritsar</td> <td>51</td> <td>50</td> <td>101</td> </tr> <tr> <td>Jalandhar</td> <td>66</td> <td>66</td> <td>132</td> </tr> <tr> <td>Patiala</td> <td>20</td> <td>50</td> <td>70</td> </tr> <tr> <td>Bathinda</td> <td>24</td> <td>45</td> <td>69</td> </tr> <tr> <td>Ludhiana</td> <td>61</td> <td>99</td> <td>160</td> </tr> <tr> <td>Mohali</td> <td>40</td> <td>33</td> <td>73</td> </tr> </tbody> </table>	District	Gypsys	Motor Cycles	Total	Amritsar	51	50	101	Jalandhar	66	66	132	Patiala	20	50	70	Bathinda	24	45	69	Ludhiana	61	99	160	Mohali	40	33	73	605(262 Gypsy's + 343 M/c's)
District	Gypsys	Motor Cycles	Total																											
Amritsar	51	50	101																											
Jalandhar	66	66	132																											
Patiala	20	50	70																											
Bathinda	24	45	69																											
Ludhiana	61	99	160																											
Mohali	40	33	73																											
1.13	Free Standing Metallic Rack for Stacking Servers having complete electrical connections	01- for each location																												
1.14	Gen Set of 40 KVA capacity of reputed make	01- for each location																												
2.	APPLICATION SOFTWARE																													
	Software's for Call Centre (5) operation, CTI , ACD ,PCR Dispatch Center operation(04), GPS, Communication, Database management and other software for successful completion of the project. The software may be customized as per the requirements of the Punjab Police.	Lot - for each location																												
3.	SERVICES																													
3.1	Seamless Digital map of Mohali (including Mohali (30 Sq. Km.), Kharar (29 Sq.Km.) & Zirakpur(20 Sq.Km.), Jalndhar (105 Sq.Km.), Amritsar (169 Sq.Km.), Patiala (67 Sq.Km.), Ludhiana(172 Sq.Km.) and Bathinda (68 Sq.Km.) Cities on 1:2000 Scale for converting urban areas including upcoming residential colonies and 1:10000 for areas which are rural in nature using High resolution Satellite data will be provided by the supplier.	1 - for each location																												
3.2	System Installation, Integration, Testing, Commissioning and Optimization	Lot - for each location																												
3.3	Training																													
	(a) System Administration and Maintenance Training, at the user's location, will be structured so as to train 02(four) of the Punjab Police personnel deputed for the purpose.	02 - for each location																												

	(b) User Operational Training, at the user's location, will be structured so as to train up to 05 (Five) of the purchaser's supervisory and training personnel who will, in turn, train individual operators.	05 - for each location
	(c) Technical Maintenance Training, at the manufacturer's location, will be structured to train up to 01(one) engineers in the complete trouble shooting and maintenance of the equipment to both the board replacement and board repair level.	01 - for each location
3.4	GPRS based data connectivity for 605 vehicles on rental with unlimited data usage and SMS usage (Annual Rental & 3 Years Cost)	To be quoted for each location separately and also the total.
3.5	2MBPS Leased Line connectivity for all the locations and Service provider (Annual Rental & 3 Years cost)	To be quoted for each location separately and also the total.

4. Hardware for ACD (Automatic Call Distribution)

4.1	Analog Telephones with CLI Facility of reputed make	15 - for each location
4.2	24 ports Gigabit LAN Switches of reputed make	As required for each location
4.3	Head Sets of reputed make	15Nos - for each location
4.4	Krone MDF	01- for each location
4.5	Commensurate capacity Generator, UPS with Servo stabilizer of reputed make with minimum 8 Hrs. Power Back-up.	01 Lot - for each location

5. Software for A.C.D. (Automatic Call Distribution)

5.1	Call-Center Supervision Software	01 Position - for each location
5.2	Automatic Call Distribution Software for 5 Agents	01 Lot - for each location
5.3	Computer Supported Telephony Application/Computer and Telephony Integration System(CSTA/CTI)	01 Lot- for each location

5.4	Installation, Testing & Commissioning	01 Lot- for each location
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- Note**
- 1. The bidder shall quote as per above breakup giving nomenclature, model no. and quantities etc. of the quoted items. The same should be enclosed un priced in the technical bid and priced in the commercial bid as per the Performa for price schedule (Chapter-6).**
 - 2. Any other item/software/service required for successful completion of the project shall be provided by the finally selected bidder within the quoted prices.**
 - 3 The bidder shall quote the rates of item 1.12 separately as there is proposal to include more vehicles in the PCR fleet. Therefore as and when more vehicles are included in the PCR, bidder is bound to provide similar type of equipment in newly inducted vehicles.**

CHAPTER – 4**SPECIFICATIONS AND TECHNICAL DETAILS****1. GENERAL**

- 1.1 Punjab Police Housing Corporation for Punjab Police intends to upgrade the Police Control Room for operations to improve the Police response to the distress calls received on Police Assistance No.100. It is desired to design the system with a long-term vision using contemporary technologies in the telecommunication field.
- 1.2 The project involves GIS/GPS based Automatic Vehicle Tracking System, electronic form management and integration with the PA-100 Switch and digital land base map.
- 1.3 It is intended to use Geographical Information System (GIS) and Global Positioning System (GPS) technologies to track the PCR Vans/Motorcycles and graphically display its position on the digital map of all Cities (Jalandhar, Amritsar, Bathinda, Patiala, Ludhiana and Mohali) at the respective Police Control Room (PCR).
- 1.4 The digital map of all cities and PCR Vans/Motorcycles should be made available on a Central screen using heavy duty map projection system in their respective PCR and PPHQ, Chandigarh and area wise display on the screens of the dispatchers with zooming facility.
- 1.5 The system should be capable to define various color and symbols according to the tasks defined to it. It should be possible to define vehicle symbol color and select the color of vehicles that are assigned any particular task, or it is enroute to take up the task or it has finished the task assigned to it and free to take up any new task. The system must be capable of identifying the nearest PCR Vans/Motorcycle from the point of distress call. It should also display the shortest possible route for the purpose.
- 1.6 The system should also have viewing facility for Digital map and location of PCR Vehicles at PPHQ, Chandigarh .
- 1.7 The vehicle position in the quoted AVTS System should have better than 10 (ten) meters accuracy and the PCR Vans/Motorcycle should be visible moving on the road on the GIS map.
- 1.8 If a repeat call from the same originator is received, it should open with the earlier call challan(s) and preferably land on the same PA-100 position if it is free.
- 1.9 The archiving facility should be there in the System.
- 1.10 It is proposed to carry out recording of all calls received on PA-100 at two places simultaneously. One at DVLS(Digital Voice Logging System) for central recording of all calls, secondly on the LAN for individual recordings. Each individual call will be recorded and attached with the challan form of that call and will be forwarded to the dispatch wireless operator on the LAN alongwith the challan. Dispatch wireless operator should be able to listen to the call, if need be, and also should be able to forward it to the PCR Van(s) /Motorcycles through the GPRS channels.
- 1.11 The System should have capability of redirecting any recorded call to the user defined telephone number.
- 1.12 The System should have the facility to give acknowledgement to the Call Taker when he transfers a challan/ call to the Dispatcher.
- 1.13 The system should be designed in a manner that operational data is not lost in case of any failure of equipment or communication network.

- 1.14 Correlation with AVTS performance for capacity planning and maintaining SLA (Service Level Agreement), AVTS performance reports per installation basis (vehicle wise) application wise and user wise will be generated.
- 1.15 The Supplier shall replace the application and equipment whenever they stop working or start mal-functioning with version/model or application/equipment during the warranty and AMC period. They will update the application software with the latest versions as and when available.
- 1.16 Punjab Police will own the AVTS data and Application Software developed for Punjab Police under this project alongwith its **source code** including supporting classes, modules, etc. which shall be provided by the Supplier before final acceptance of the System.

2. SYSTEM ARCHITECTURE

- 2.1. The solution must incorporate current technologies and open-systems components that are commercially available for both software and hardware computing systems. The intent is to use the standard Intel platform for all hardware, the latest Windows software as the operating system, and a standard commercial relational database system (RDBMS), such as Oracle/SQL etc.. This common database should serve all the needs of the Punjab Police. It is expected that the system will be more or less commercial, off-the-shelf (COTS) application, tailored and optimized for Punjab Police.

- Fault Tolerant RAID configured Server(s) with RAID 5 for Application & Database, AVTS application, ACD(Automatic Call Distribution) & CTI (Computer Telephone Integrity) should be rugged and of latest configuration of HP/IBM/DELL as given below:

- | |
|---|
| <ul style="list-style-type: none"> - Intel Xeon @ 3.0 GHz processor or higher - 4 MB cache - 8 GB RAM - 3 x 250 GB SAS Hot Swap RAID Configuration - DVD R/W - 19" TFT-SVGA Color Monitor - Integrated 8 MB SVGA graphics - Dual 10/100 /1000 NIC - 1 Serial, USB and 1 parallel port. - Redundant Power Supply - Windows Server OS with license and CD - Keyboard and Mouse - Backup Gigabit Tape Drive - Anti Virus with 3 years warranty and updates |
|---|

- For Backup/ Redundant Server configuration of HP/IBM/DELL will be as given below:-

- | |
|---|
| <ul style="list-style-type: none"> - Intel Xeon @ 3.0 GHz processor or higher - 4 MB cache - 16 GB RAM - 6 x 250 GB SAS Hot Swap RAID Configuration - DVD R/W - 19" TFT-SVGA Color Monitor - Integrated 8 MB SVGA graphics |
|---|

- Dual 10/100 /1000 NIC
- 1 Serial, USB and 1 parallel port.
- Redundant Power Supply
- Windows Server OS with license and CD
- Keyboard and Mouse
- Backup Gigabit Tape Drive
- Anti Virus with 3 years warranty and updates

- PA 100 Call Taker/ Dispatch Wireless Operator /Supervisor /GIS workstations should Be rugged and of latest configuration of HP/IBM/DELLas given below:

- Intel Core 2 Duo @ 3.0 GHz processor
- 2GB RAM
- 250 GB HDD
- DVD R/W
- Dual 17" TFT Color Monitor
- Integrated 10/100/1000 NIC
- 3 PCI and 1 AGP slots
- Dual Head Graphics with 256MB RAM
- 1 serial, 6 USB & 1 Parallel ports
- Keyboard and Mouse
- Windows Pre loaded with license and CD
- Antivirus with 3 years warranty and updates

- 10 KVA (N+1 Redundant) online UPS with minimum 1 hours backup; 2KVA (N+1 Redundant) online UPS with minimum 2 hours backup at PPHQ of modular architecture.

3. COMMUNICATION SOFTWARE

- 3.1 The software supplied must include the following features but not limited to.
- 3.2 Communication software must provide and manage the data communication links among the PCR, Vehicle Sub-System and communication service provider to ensure delivery of real time vehicle positioning information to the PCR and exchange of data messages between the PCR Van/Motorcycles and the PCR using hired data network (GPRS).
- 3.3 The software must be capable of managing all data message communication, including real-time vehicle positioning information, between the Dispatch Consoles and the vehicles.
- 3.4 The product must also maintain its own database of vehicle communication and have reporting capabilities. It must be able to send the appropriate configuration commands to each PCR Van to maximize the capabilities of the Vehicle Sub-System and also maintain the vehicle configuration database.
- 3.5 Support multiple channels/instances to provide redundancy and maximum system availability.

4. CENTRAL AVTS SERVER SOFTWARE

- 4.1 The software supplied must include the following features but not limited to:
- 4.2 The Central AVTS server software must coordinate the communication between all the product modules. The software must be able to manage all data communication between the Call taker stations, Dispatcher wireless stations and PCR Vans etc.

- 4.3 It must provide storage of all the data pertaining to the place of incident(s) as well as vehicle information. It must record all relevant data communication between the various users within the system and PCR Vans.
- 4.4 The software should be capable to display, query the Base map data given by CCE. The location of incidents and PCR vans should be available on a separate layer residing at the PUNJAB POLICE AVTS SERVER at PCR, Mohali would be updated dynamically.
- 4.5 The database system must be open, be based on the relational data base model that provides for standard SQL, be ODBC-compliant, and not proprietary to a single hardware platform or operating system.
- 4.6 The system should be able to generate various reports in the formats desired by Punjab Police. This process should occur in parallel to the Call taking, dispatching, and supervisory functions.
- 4.7 The system must be able to display the following:
 - (i) a “snapshot” summary of all logged-on PCR Vans.
 - (ii) event data by specifying criteria about the event, when the event number is unknown (such as time and date, type, reporting area, case number, common place name and/or location).
 - (iii) a summary list of all events by dispatch group, active/pending, priority & event type.
- 4.8 The system must be able to retrieve the history of an event, showing an audit trail of all entries with date and time stamps generated during event processing. Audit trail should not be editable.
- 4.9 It must be able to give histograms, generate and publish the reports
 - (i) for total number of calls per hour of the day or predetermined blocks of time.
 - (ii) of number of events in the system by priority for the specified time period.
 - (iii) of number of events by source, time of day, and day of week.
 - (iv) of the history of a Wireless operator’s activity, showing time logged on and off and positions worked
 - (v) any other user defined criteria
- 4.10 The system must provide the capability for the operator to generate reports of database records associated with map features. A fence-type capability in which the operator selects the desired map features for the report is desired.
- 4.11 The system must provide the following functions to be generally used by Communications Center Supervisory personnel. These functions can, however, be used by others, subject to appropriate security authorizations:
 - i) Assign dispatch groups to workstations as needed; current dispatch group assignments must be displayed when requested.
 - ii) The ability to monitor an event from another workstation of another dispatch group in case one or more workstations in a given dispatch group are non functional.
- 4.12 The system must permit messages and commands to be scheduled for automatic execution on a particular day and time or to occur every day at a specified time.
- 4.13 The capability for PCR Van and event information to be displayed on an interactive map for a visual summary of current activity throughout the agency must be provided.
- 4.14 To minimize transactions over the network and maximize the performance of the integrated map, the graphic map data may reside at the Call taker and Dispatcher workstations.
- 4.15 Domain level authentication of user rights shall be incorporated in the system.
- 4.16 The operator should be issued a list of pending challans / jobs while signing off and new login so that the new operator is well aware of the job in hand.

- 4.17 The Security Administrator must be able to add, change, and cancel user identifications and their initial passwords and permissions for the system. The same is to be performed for the software products, with specific classifications for telephone operator (Calltakers) and wireless operators (Dispatchers).

6. AVTS (Automatic Vehicle Tracking System -CLIENT SOFTWARE)

- 6.1 Desktop based AVTS Client should be a product that allows the operators to access dispatch information needed. With the proper security privileges, database access licenses (on the server), , these client seats should e able to access current and historical information from the AVTS Server system.
- 6.2 Positions with AVTS Client access are to be provided with the capability to display information of PCR Vans and their status, as well as pending and active events. PCR Van and event information may also be displayed on an interactive map for a visual summary of current activity. If the operator wants more detailed information about a specific PCR Van or an event, a simple mouse click should retrieve the additional data. AVTS Client should have the capability to accomplish a number of other tasks. For example, the interface should be used to display historical information, such as a listing of a particular PCR Van's activity for the past week or the number of traffic accidents reported during a particular month. AVTS Client also should permit the operator to search operational information such as the personnel who are on duty, what special equipment they may have in their vehicles and any specific skills they have.
- 6.3 AVTS Client also should enable the user to initiate limited activities in the AVTS Server System. The user should be able to create a call for service, place a PCR Van in or out of service, update personnel lineups, and send a message to any user on the system.
- 6.4 Capabilities to be provided by AVTS client must include but not limited to the following:
- (a) Monitor pending events and PCR Van status
 - (b) Display the map with windowing operations to view location of PCR Vans
 - (c) Configurable monitor display and the map within a single browser page
 - (d) Query PCR Van and event details, including supplemental event information
 - (e) Create a simple event and add comments
 - (f) Place individual PCR Vans in and out of service
 - (g) Display and edit PCR Van personnel, equipment, location, and mileage
 - (h) Display, edit, and receive messages among Call takers, Dispatchers, other Clients
 - (i) Create, update, and view AVTS lineups
 - (j) Query PCR Van history, summary, equipment, and lineups
 - (k) Search for events and/or supplemental information
 - (l) Query signed-on users and database status

7. MESSAGING CAPABILITIES

- 7.1 Messaging capabilities must be provided within the AVTS environment.
- 7.2 The Call takers and Dispatcher wireless operators must be able to send/receive unlimited messages to/from other workstations on the LAN and the PCR vans through the hired data network (GPRS).

- 7.3 The messages can be addressed to individual(s) or to groups.
- 7.4 A scrollable listing of valid destinations may be available to help address the message.
- 7.5 The messages that are sent and received on the system must be stored for later retrieval.
- 7.6 Suitable search fields should be provided to support retrieving specific messages. The operator should be able to search on Message Number, Number Range, Subject, and Date/Time Range etc.
- 7.7 The system should provide the capability to prioritize the AVTS messages.
- 7.8 Textual messages are to be transmitted. However if system is having the capability of graphical messages also it should also be mentioned separately and its pros and cons should also be given.

8. DIGITAL CITY MAPS

- 8.1 Seamless Digital map of Mohali (Kharar & Zirakpur), Jalndhar, Amritsar, Patiala, Ludhiana and Bathinda Cities on 1:2000 Scale for converting urban areas including upcoming residential colonies and 1:10000 for areas which are rural in nature using High resolution Satellite data will be provided by the supplier .
- 8.2 Bidder will have to update the Digital Map periodically on Half yearly basis within Warranty period.
- 8.3 The land base maps to be provided by the Supplier will be in .shp format having layers : Residential units, Commercial units, important public buildings, roads, open areas, location of colonies, villages etc and other layers related to Police.

9. INTEGRATION & TRAINING

- 9.1 The successful bidder has to implement the entire project on turnkey basis. It shall include design, development, supply, installation, integration with existing components, commissioning and providing the warranty and post warranty services for successful implementation and operation of the AVTS project of Punjab Police.
- 9.2 The successful bidder shall provide full System Architecture, Schematic wiring diagram with pin layouts, footprints of the system setup and its integration to Punjab Police.
- 9.3 The successful bidder shall provide, to the Purchaser, the Source Code as well as the Object Model Diagram of the application specific to Punjab Police.
- 9.4 The successful bidder shall provide the following training:-
 - (a) System Administration and Maintenance Training, at the user's location, will be structured so as to train 02(Two) of the Punjab Police personnel deputed for the purpose for 10 days.
 - (b) User Operational Training, at the user's location, will be structured so as to train up to 5(Five) of the purchaser's supervisory and training personnel who will, in turn, train individual operators for five days.
 - (c) Technical Maintenance Training, at the manufacturer's location, will be structured to train up to 01(one) engineers in the complete trouble shooting and maintenance of the equipment to both the board replacement and board repair level for 10 days.

10. Specifications given in this document are indicative in nature. However the bidder should engineer the system and any modifications required in size & specifications may be indicated with relevant calculations.

11. SYSTEM CONFIGURATION: The proposed Automatic Vehicle Tracking Systems may be divided in to following three Sub-systems: -

- i) Vehicle Sub-System
 - a) GPS Receiver
 - b) Mobile Data Terminal (MDT)
 - c) GPRS Modem
- ii) Communication Sub-System (GPRS on Rental)
- iii) Control Room Sub-System
 - a) Call Center (100)
 - b) Dispatch Wireless Operator
 - c) Supervisor Position/Administrator

12 VEHICLE SUB-SYSTEM: The vehicle sub-system may comprise of the GPS Receiver, Mobile Data Terminal (MDT), GPRS Modem and related accessories integrated together. Broad specifications and features of the three sub-units are given below: -

i) GPS Receiver : Broad specifications are listed below:

Tracking Channels	12 Channels or upgradable up to 20 channels
Acquisition time:	
Cold Start	Typical Time to First Fix (TTFF)60 seconds or better
Warm start	40 seconds or better with current almanac position and time
Hot start	TTFF with current almanac, position time and ephemeris 10 seconds or better
Re-acquisition time	0.1 sec or better
Maximum blockage	Maximum upto 30 seconds
Position accuracy	10 meters at all times
Satellite data collection	10 seconds for synchronization Continuous data collection and parity checking on all channels
Position update rate	10 second
Antenna	Embedded Passive, or External Active
Mounting	Magnetic base for external antenna
Environmental	
Operating temperature	-5 deg. To + 55 deg.
Storage temperature	- 30 deg to + 70 deg.
Humidity	10-100 % condensing at temperatures varying 50° to 0°
Electrical Power	12V DC(Internal Vehicle battery to be used)
Backup power	Lithium battery inside housing
Storage	20 hours of data on position, date and time

Note: Bidder to quote for the GPS two way communication equipment separately in the commercial bid, so that in future, if required, PCR vans can communicate with the control room. The technical specifications for the GPS two way communication remains the same as given above. This will be treated as optional.

ii) Mobile Data Terminal & GPRS MODEM: The MDT is required to exchange messages between the PCR and the PCR Van via the GPRS data Modem with the following broad features:

- a) It shall ensure transmission of the vehicle position information every 10 seconds when PCR Van is on Call, 15 sec when PCR Van is moving without assignment and 5 minutes when it is stationary. The frequency of the vehicle data transmission should be settable by the purchaser.
- b) It shall have inbuilt capability of hopping the BTS towers to enable seamless roaming of the PCR Van throughout Mohali.
- c) It should have the facility of store and forward data in case of communication connectivity is lost.
- d) The MDT should have capability of receiving and displaying SMS .
- e) It should have a suitable printer for printing received message.
- f) It should have auto fall-back mode to send the vehicle position information to PCR,Mohali through SMS as and when GPRS data connectivity is unavailable and resume back the normal operation automatically.
- g) It should be possible to use the same GPRS Modem for different service providers.
- h) Alarm & alert notification to be given to the driver in case of any failure in the vehicle sub-system.
- i) MDT should be upgradable to support video camera input at the PCR Van.

13. COMMUNICATION SUB-SYSTEM

- i) The data communication channels required to exchange data between the PCR, Mohali and the PCR Fleet shall be taken on Rental from the existing service provider. It could be based on the GPRS technologies.
- ii) Communication of data should be reliable without any loss of data.
- iii) Each BTS of offered service provider should have configuration to ensure required 10 Sec. update time for the vehicle position at all times in all BTS area.
- iv) Dedicated connectivity e.g. fiber optic to be provided from Service provider Data Center to PCR,Mohali at appropriate data rate for real time monitoring of PCR Vans.
- v) Identify specific areas of existing GPRS blackout zones and Police critical locations in Mohali and enhance number of BTS towers and their capacities, if required.
- vi) The GPRS data connectivity should be seamless while moving from one BTS site to other BTS site in Mohali.
- vii) Redundancy provided in VMU to ensure if GPRS fails due to unforeseen reason and then SMS facility is activated as a fall back mode.
- viii) *24*7*365 system operation would require proactive monitoring, fault detection and management for reduced downtime and regular fine tuning of the communication links for best response time.*

15. CONTROL ROOM SUB-SYSTEM

15.1 GENERAL FEATURES:

- a) The PA-100 operator and Dispatcher positions should be equipped with facility to add Text in English to the Challans.
- b) The challans should be transferred electronically among different positions.
- c) The system shall be integrated with the Telephone databases to get the address of the caller on receipt of a call on PA-100.
- d) It shall also be integrated with the cellular database along with the CLI of the caller.
- e) The system must be integrated with GIS database to know the scene of incidence on digital map with utilization categories /Feature Layers.
- f) The GIS Database should be available to the PA-100 operator as well as Wireless Dispatcher in Police Control Room (PCR).
- g) The system must be integrated with GPS based vehicle tracking system for automatic PCR Van tracking and fleet management.
- h) The system shall be integrated with central Integrated Digital Voice Logging system in addition to the individual recording of calls received on PA-100. We are already having Digital Voice Logging System in Control Room
- i) All possible online/ offline reports should be available in tabular form.

15.2 WORKSTATION REQUIREMENTS

- a) Workstations are required for all Call Taker, Dispatcher, supervisor, data entry, command room and administrator positions.
- b) Integrated workstation with call taking & audio recording capability is required for each Call Taker position.
- (e) Login /Logout: By selecting Login option from the menu the operator can login to the system. There should be separate Login screen mentioning the fields for user id, name, belt no., password & position number of the terminal on which the operator is sitting. The operator can exit the system by selecting the Logout menu option.
- (f) There should be a validation for fields used while Login into the system.
- (g) The Login/Logout of an Operator should be intimated to the Supervisor.
- (h) Pause: If an operator wishes to take a short break from work, he/she can select this option. Confirmation of pause should be given by the Supervisor. When an operator has taken a pause, no calls should rout to that operator by the ACD Server.
- (i) Resume: Operator can select this option to resume work after a short break by entering the password again. In this case a message should be passed to supervisor to keep him/her informed. As soon as the operator resumes its work the ACD Server should start routing the calls to that operator.
- (j) Focus Challan: Operator should use this option in case two challans are opened on the screen in front the operator and operator can select either according to priority for filling up the information.
- (k) Manual Entry: This menu option should only be used in case the information filled by the PA-100 operator is not sent to PCR Dispatcher.
- (l) View: This menu option should have sub menu with the following options.
 - i) Crime, ii) Enquiry and iii) Blank, on clicking each option the no. of calls saved under this category will be displayed.

- (p) A status bar should appear at the bottom of the workstation screen displaying the Operator Position, Name & No. of operator, User ID, Login duration and calls attended

16. FEATURES FOR CALL CENTRE (100)

All the PA-100 calls will be directed to the call center. The Call Center shall have 05-Nos. PA-100 operator positions, 01-Nos. Supervisor/Administrator alongwith GIS display and headphone with boom microphone for hands free operations.

- a) Call originating location area should also be displayed on the GIS map automatically based on landline address or Cell site location etc. The operator should be able to change this displayed location manually to precisely pin point the scene based on the caller's feed back received on the phone. This incident location information will automatically go to the dispatcher along with the challan.
- b) The selection of different fields and options may be possible through, mouse, and keyboard.
- c) On the screen of every position the system clock, name of the operator, operator ID, Login time, number of calls attended (Major/Minor) etc. should be displayed.
- d) If the challan remains on the screen for more than a prescribed time, there should be audio alert and a visible light indication flashing on that position as well as the supervisor node.
- e) There should be a SOS button, with the press of which the challan could be opened simultaneously on the concerned dispatcher screen in case of an emergency call.
- f) Ring of the distress caller's phone should ring on PA-100 Operator's head set and also flash on the screen.

17. CALL TAKING AND DATA INPUT:

- 17.1 The operator (CallTaker, Dispatcher) may input data and interact with the system using the following methods:
 - (a) Descriptive forms and dialogs
 - (b) Pull-down and pop-up menus to navigate
 - (c) Drop-down lists and combo boxes to make selections
 - (d) Right mouse button and context menus to select options (the subset of commands for the context menus should be configurable). Drag-and-Drop
 - (e) Screen icons on either the dialogs or the map
 - (f) The system must display a blank event entry dialog to be used to add new events.
- 17.2 Navigation between fields must be rapid and intuitive. In addition, the following fields must be provided for recording information about the event: Event Location, Event Type, Event Subtype, Event Priority, Event service and routing information, Remarks associated with the event, Caller Name, Caller Address, Caller Telephone Number etc.
- 17.3 A CallTaker must be able to enter an **“Emergency call”** with minimal information (location and event type), send it to the Dispatcher, and then continue updating the call with the additional information. The Dispatcher will then be informed of the updated information.

- 17.4 The calltaker must be able to bring in the Dispatcher in conference mode in case of emergency calls so that he is also able to get immediate first hand information of the distress caller and send the PCR van to the scene of incident while the call is in progress or immediately thereafter.
- 17.5 The operator must be able to change any user field on the event entry dialog before data is accepted, such as changing the incident type to another defined one.
- 17.6 A list of commonly used standard attributes should be available by selection from a list or direct entry, with the list available on demand, showing all the codes or values. Incident type is one such attribute.

18. LOCATION DETERMINATION

- 18.1 The location of an incident may be entered by address, common place name etc.
- 18.2 The system should provide the option to display comments in the location string to make it easier for operators to find and retrieve commonplace events from event and PCR Van status dialogs.
- 18.3 The location of an incident may be entered by pointing to a location on the map screen with the mouse. The location can be either a street segment or a map feature, such as a symbol representing a hospital.
- 18.4 A location validation function must search the AVTS SYSTEM database for the location, as entered on the event entry dialog, to confirm its validity. The operator must be able to manually verify the location prior to an event.
- 18.5 The operator will be able to override failed location verification. Each time for override operation, an entry will be recorded in the database for administration reporting purposes as to which addresses failed to verify.
- 18.6 The location verification process must perform the following functions:
 - (a) Attempt to find an exact match for the location as entered.
 - (b) Display a list of possible matches if an exact match is not found, and allow the operator to select the correct choice from the list.
 - (c) Fill in the location field on the event entry dialog with the selected location.
 - (d) Allow for the display on a graphic map of an indicator pointing to the verified location. The map must be positioned to show the location. The field of view for the map shall be user-configurable by workstation (area and level of detail) and show all other events and active PCR Vans that fall within this field of view.
 - (e) Operators must be able to place event symbols on the map at non-verified locations.
 - (f) The location verification process should reinitiate upon the modification of location information..
- 18.7 **Bidder shall suggest challan format most suitable for Punjab Police.**

19. FEATURES FOR DISPATCH WIRELESS OPERATOR

- 19.1 There will be 03 Dispatch Wireless Operators to maintain constant touch with the PCR vans in their respective divisions, through existing Radio System. On receipt of distress call, the Dispatch Officer has to direct the nearest available PCR van to the scene of crime/incident and simultaneously intimate the concerned Police Station for the local police action.

- 19.2 (a) The challans should appear on the concerned Dispatcher Screen in different colors for different categories of crime and the place of incident on the GIS/GPS display. Online position of the PCR vans should also be available on the same GIS/GPS display for the operator to know his resources.
- (b) The software should have facility to record the communication between the dispatcher and PCRs through VHF sets.
- 19.3 There should be facility to display the challans on the Dispatcher screen in various user-friendly forms. The blow up view of the challan should be available on selection.
- 19.4 The Dispatch Wireless Operator screen will have two windows. One window will display the Challan and other window will display the map having location of incident and live PCR Van/motorcycles positions.
- 19.5 Basic Dispatch Capability Software will include the following but not limited to:
- (i) It shall provide full dispatching capabilities on a single screen multiple window workstation. Interactive mapping must be combined with both dispatching & monitoring functions. The map display must interact with the information-entry display so that all information received for emergency calls is accessible and visible to the Dispatcher.
 - (ii) With the dispatch position, the staff must be able to deliver services more effectively, monitor units and events, and control the operations of all PCR Vans. The visual information must be easily assimilated so that the “Dispatchers” can make their decisions in routine and emergency situations quickly, accurately, and with confidence knowing that they have the best information available.
 - (iii) Dispatcher screen shall display a window for entering call information and showing pending events, PCR Van status etc. The second window shall display GIS map portion relating to the call.
 - (iv) The data on both the forms window and the map window is to be synchronized and kept up-to-date as new information is received from the Calltaker and vehicles. Buttons on this screen must be able to control the appearance of the map display allowing control room operators to zoom-in on views, window certain areas, attach related graphic files to expand their informational base, turn on and off different map layers to control the amount of data shown, and query the database about map symbols.
 - (v) The software will advise shortest path for the PCR van to reach the scene of incident. The Dispatcher must be able to select any event at any time by specifying the event or PCR Van assigned within the enhanced GUI or the command line.
- 19.6 The system must recommend PCR Vans to be dispatched for selected events based on the following information: Location of event, Status of PCR Van, Type of event, Priority of event, Type of agency, PCR Van’s assigned area, Type of PCR Van, etc.
- 19.7 The Dispatcher shall be able to cancel events, with the reason for cancellation duly noted in the event history record. The making a comment mandatory should be optional
- 19.8 Closed events may be reopened and handled in the same manner as new events.
- 19.9 The system should allow an operator to add comment text to a closed event by keying in the event number of the closed event

- 19.10 The system must allow the Dispatcher to enter a “situation found” code into the event record after being advised by the PCR Van that the event is not of the original type dispatched. The new “situation found” must be appended to the event record, but must not change the event type entered.
- 19.11 The system must create an event history record each time the status of a PCR Van or an event is changed or a significant event transaction occurs. The information captured by this record must contain the type of transaction, necessary details of the transaction, time and date, workstation identification, and operator identification. The total record, including all significant data, for an event may be used, in chronological order, as an audit trail of all significant event and PCR Van activity.
- 19.12 PCR Vans assigned to a dispatch group must be displayed within a status dialog for the workstation(s) assigned to that group
- 19.13 The system must provide a command that will display a chronological summary of all actions invoked against an event and display all comments associated with an event. The information displayed must include the date, time, workstation identification, operator identification, type of transaction, and necessary details of the transaction.

19.14 Related Location Information

- (i) Each time an event address is accepted into the system, the presence of any data that may be associated with the address or within an area around the address must be retrieved and listed. This information may reference previous call history, special instructions, wanted parties known to frequent that address, or other special situations regarding that address and area.
- (ii) The Dispatcher must be able to recall this related information with a single command. If an operator views this data, that action will be recorded in the chronology of the event.

19.15 Event Creation and Editing

- (i) A command must be available to log an event into the system for historical purposes, even if the event requires neither a field response nor a written report.
- (ii) For events logged for historical purposes, the system should provide the capability for such events to remain in an open state after creation.
- (iii) The operator should be provided with the capability to insert event comments.

19.16 Duplicate or Nearby Events

- (i) The system must detect and display a list of active events in the vicinity of a current call. This display must occur automatically after a location is verified, but prior to event acceptance into the system. This screen must also be available by invoking a separate command. The operator must be able to review the details of active events from the list.
- (ii) The system must allow the operator to identify which event from the nearby list is a duplicate of the call being entered. All of the duplicate call information entered must be appended automatically to the original event.
- (iii) There must be a command that can cross-reference an event to a duplicate event. The duplicate event must be canceled, the original event remains active, and both event history records marked accordingly. Both records must be available for future reference.

- (iv) The system must allow an operator to cross-reference one or more events to an event record. An inquiry into any one of the cross-referenced events will produce a list of all the cross-referenced events.
- (v) It must provide a mechanism for disassociating two cross-referenced events.

19.17 Transferring Events

- (i) The user must be able to transfer an event to another dispatch group. The new Dispatcher must then have control of the event and all PCR Vans assigned to that event.
- (ii) The system should support the capability to “lend” a PCR Van to another dispatch group. PCR Vans assigned to another Dispatcher must be returnable to the lender.

19.18 Ending Events

- (i) The system must give a visual and/or audible indication to the Dispatcher(s) each time a new event is routed to that workstation or group.
- (ii) The Dispatcher’s screens must display a list of pending events (events not yet dispatched) showing, at a minimum, the event location, type, priority, event number, status, and number of minutes in its current status. A visual indicator must also be provided to indicate that an event has exceeded the predetermined time in its current status. An event will be removed from the pending list when it is dispatched, canceled, or transferred to another workstation.
- (iii) When a Dispatcher selects an event from either the pending events display or the PCR Van/events display, the event data will be displayed in the Dispatcher’s main form and will not require the use of a separate window for processing the event.
- (iv) The order of pending events must be user-definable.
- (v) Events in the pending list must be color-coded based on status and have a pre-established alphanumeric status code to indicate New event/not reviewed, Reviewed/still pending, Held for PCR Van, Events awaiting haalat report etc.
- (vi) The color status used in the pending queue should be the same as the event icon color on the interactive map display.

19.19 Event Priorities

- (i) An emergency event function must be provided to automatically raise an event to the highest priority and place a pop-up dialog notifying the appropriate workstation(s) of the emergency.
- (ii) The system must automatically assign a priority to each new event based on the event type. The current priority related to the selected incident must be displayed on the event entry dialog. The operator may elevate or lower the assigned priority of any event.

19.20 Event PCR Van Recommendations

- (i) The system must recommend PCR vans to be dispatched for selected events based on the Event Location, Event Type, PCR Van’s Status, PCR Van’s Assigned Area, PCR Van’s Already Assigned to Event and Response List

- (ii) The system must be user configurable to allow only available PCR Vans to be recommended or to allow all PCR Vans to be considered for recommendation. The system should be able to recommend based on status of PCR Vans.
- (iii) The system must allow the operator to dispatch the total recommendation, accept only selected PCR Vans, or override the entire recommendation.
- (iv) The system must allow for recommendation of the PCR Van closest to the event by actual travel distance, not by calculating a straight line between PCR Van and the event.
- (v) The system must be able to respond properly based on event type and location. Event types must be definable to indicate that the event is at a high-priority location.

19.21 Event Broadcast Information: A method must be available to issue bulletins and other agency- wide information, regardless of priority or event relationship.

19.22 PCR Van Status, Monitoring and dispatch

- (i) All PCR Vans assigned to a dispatch group must be displayed within a status dialog for the workstation(s) assigned to that group.
- (ii) The PCR Van status dialog must display, the PCR Van Call Sign, event number, PCR Van status, location of the PCR Van, type of event, if assigned, and time since the last change in status etc. The PCR Van's status must be indicated within the status form by appropriate color and text code.
- (iii) Status dialog data elements, color codes, and display orders must be user- definable.
- (iv) The system must allow the operator to interactively sort the status dialog by items such as PCR Van identification, location, or status.
- (v) A PCR Van's status must be indicated on the associated map screen by the same color used on the PCR Van status dialog. The map screen must also display the PCR Van Call Sign and use an icon to indicate the type of PCR Van.
- (vi) When PCR Vans are dispatched, the system must take the following actions:
 - (a) Remove the event from the pending list
 - (b) Update the event history record
 - (c) Update the appropriate PCR Van history record(s)
 - (d) Update the status of the dispatched PCR Vans on the PCR Van/event status dialog and in the map window (all maps windows if multiples are displayed)
 - (e) Start the status timer for the associated PCR Van(s)
- (vii) A command must be available to dispatch a predefined group of PCR Vans as a single entity, if required. This command must display status, location, and information that may affect the decision to dispatch all PCR Vans assigned to the task.
- (viii) The system must support the assignment of multiple events per PCR Van, particularly in cases where several events may overlap.
- (ix) The AVTS system should provide the capability for the Dispatcher to calculate way point distance for deciding shortest route of destination in case PCR van needs help.

19.23 PCR Van Control Functions: The system must provide commands to support the following PCR Van control functions and provide the command name and

/or a brief description of how the function is provided. If any of the items are not provided, indicate so in the narrative response:

- (a) Place a PCR Van enroute to the scene
- (b) Pre-empt a PCR Van from an assigned event
- (c) Place a PCR Van on the scene of an event
- (d) Clear a single PCR Van from the scene
- (e) Clear all PCR Vans from the same event
- (f) Allow a PCR Van to be available on the scene
- (g) Allow a PCR Van to be unassigned and unavailable for recommendation
- (h) Place the PCR Van available on patrol duty
- (i) Assign PCR Van(s) to back up or assist another PCR Van, en-route or on the scene
- (j) Place a PCR Van out-of-service when it is unavailable for attending calls.
- (k) Transfer the control of a PCR Van from one dispatch group to another
- (l) Allow one PCR Van to cover the assigned area of another PCR Van
- (m) Allow a PCR Van to report an event to the Dispatcher and assign itself to that event (PCR Van-initiated event) etc.

Bidder shall suggest challan format most suitable for Punjab Police.

20. SUPERVISOR POSITIONS

- (i) One each Supervisor workstations shall be provided in the Call Centre(100) and Dispatch Centre for supervision of Call takers and dispatchers respectively.
- (ii) One copy of the challan initiated by Call taker will also go to the shift incharge.
- (iii) All the completed challans will go to the shift incharge from the Dispatchers.
- (iv) All the challan/ printouts will be signed by the shift incharge.
- (v) The supervisor terminal should have an option button on the screen with sub-options of Important Calls, Missing Person, Dead Body, Fatal Accident, Burn, Lawaris etc.

21. ADMINISTRATOR:

Administrator will be required to do the following jobs:

- (i) Exercise over all Control of the system,
- (ii) Allocate system resources
- (iii) Delink defective resources
- (iv) Access all system resources
- (v) Prevent catastrophic failure of the system
- (vi) Dynamically reconfigure the system
- (vii) Implement security and management policies

22. RELIABILITY & REDUNDANCY:

The system should be configured in redundant mode to ensure that a single point failure does not affect the normal system operation. In the unlikely event of multiple point failures, a contingency plan should be drawn to bring the system in stage-wise Fall Back mode.

Note: The above specifications are indicative. The Bidder shall indicate additional features and capabilities of the offered system for successful and trouble free installation, commissioning, operation and maintenance of the system over and above the specifications mentioned in the tender document.

Chapter - 5

SPECIFICATIONS AND TECHNICAL DETAILS FOR ACD**1. GENERAL**

- 1.1. Punjab Police Housing Corporation for Punjab Police intends to purchase Automatic Call Distribution (ACD) capability to upgrade the Police Control Room operations and PPHQ to improve the Police response to the distress calls received on Police Assistance No.100 (PA-100). It is desired to design the system with a long-term vision using contemporary technologies in the telecommunication field to integrate with the on going project of GIS/GPS based Automatic Vehicle Tracking System (AVTS).
- 1.2. The Supplier shall be required to provide all necessary interfaces to ensure integration with the proposed "GIS/GPS based AVTS of Punjab Police.
- 1.3. All the calls received on PA-100 shall be recorded on the integrated Digital Voice Logger .
- 1.4. The System should support Multi User Group Operation enabling partitioning of the call center and user groups on the same Platform.

2. SYSTEM OVERVIEW

- 2.1. The system should be a Converged PBX System with ability to run TDM and the system should be capable of supporting Analog, Digital, Wireless DECT Phones of any make.. The proposed system must have an open architecture.

SPECIFICATION OF THE EPABX SYSTEM:

SN.	Description	Parameter
1	Technology	PCM-TDM/NON-blocking
2	Interface Approval	TEC Approval should be submitted
3	Type of interface	ISDN interface for digital, basic interface for analog lines
4	No. of Lines (Max approved by TEC) Analog trunk & ISDN BRI ,ISDN PRI Lines	16x48 upgradeable to 96 Extension
5	Type of extension Support	Analog & digital
6	Expansion of Extension	Multiple of 8/16 analog extension, 8/16/32 Digital extension(tenderer to specify the factor quoted)
7	Run Distance	Not less than 800 mtrs on 0.5mm dia cable
8	Max loop resistance for analog extension	2500 ohms including telephone
9	Requirement At the time of supply	16Analog Extensions, 16 Digital Extension,8 Analog trunk lines & 8 ISDN BRI lines
10	Expansion available(Max capacity)	Tenderer to specify the Max Capacity
11	Integrated support for digital trunk lines	To be provided

12	Standard which are to be supported. <ul style="list-style-type: none"> ➤ CAS 2 Mbps as per CCITT G.703 & G.704 ➤ CAS R2 as per CCITT Q. 421 & Q. 424 ➤ ISDN Interface as per CCITT 1.430(BRA), 1.431(PRA), 1.440,1.450,1.441,1.451,G.703(PRA),G.704(PRA),E TSI CTR 3(BA) CTR4(PRA) & Austel. 	Tenderer to specify support provided clearly.
13	Integrated support for QSIG (Q Interface) & T Interface(Switched Public ISDN line with BSS 1)	
14	Integrated Support for E&M Signalling <ul style="list-style-type: none"> ➤ E&M continuous (A & D format) ➤ E&M Discontinuous ➤ E1 	
15	ISDN Supplementary services for Digital phone	To be provided
16	Integrated Support for ACD Call Centre with CTI & Advanced Call Routing.	To be provided
17	Networking of multiple System through Digital Networking <ul style="list-style-type: none"> ➤ ETS 300011 ➤ QSIG-ECMA 141 ➤ ETS 300172 ➤ QSIG-ESMA 143 ➤ ETS 300173(CLIP,COLP,CLIR) ➤ ECMA 164 ➤ ETS 300238(CNIP,CONP,CNIR) ➤ AOC ESMA 211/212 	Tenderer to comply Standards
18	Built- in Battery Charger or TEC type approved external battery charger	To be provided & Tenderer to specify
19	Sealed Maintenance free battery for 4 hours backup	Specification sheets with details of the battery used to be provided
20	Design of EPABX System	Modular with universal slots, wall mountable.
21	Provision of remote maintenance	To be provided
22	Conferencing	Up to 6 party Conferencing to be provided (to be configurable dynamically)
23	Working on 230 Volt +/- 10% Mains	

24	Features supported by message unit <ul style="list-style-type: none"> ➤ Auto attendant ➤ DISA ➤ Voice mail for 60 mailboxes ➤ Storing up to 1000 messages 30 sec. durations eac 	Tendere to specify the compliance clearly
25	Digital Extensions of telephone instrument (For seven agent,4 VHF operator & 1 Supervisor) with programmable one touch key working on 2B+D format	Tendere to enclose detailed specifications
26	Monoreal Headset of standards make(for 12 agents)	Make to be specified by tenderer
27	Network terminal NT1 (for 8 ISDN BRI lines)	
28	Any other features offered	Tenderer to enclose details
29	Wiring of MDF, 16 digital Extension,16 Analog extension to the voice logger	
30	Provided industry tested, proved, market-leading switches to ensure smooth installation & protecting businesses existing call centre hardware investments	Tenderer to enclose details
31	ISDN PRI card for connecting one no. of ISDN PRI line from BSNL	To be provided

- 2.2. The Communication Server should be highly reliable and should ensure uptime of 99.999%. In case of catastrophic failures, the processor in hot standby mode should take over without dropping or interrupting any of the existing calls in progress.
- 2.3. The Communication Server should essentially support State-of-the-Art Digital TDM voice services. The offered system should support the following: -
- (a) Universal Port Architecture
 - (b) Distributed Architecture (Campus).
 - (c) Multi Node Networking.
 - (d) Unified Messaging
 - (e) Digital Telephones
 - (f) Direct Inward Dialing (DID)
 - (g) Direct Outward Dialing (DOD)
 - (h) Calling Line Identification (CLI)
 - (j) Data Communication
 - (k) Automated Attendant System
 - (l) Operator Consoles
- 2.4. The system should be designed with distributed switching architecture and display processing intelligence and switching capability throughout the network assuring optimal performance as the network expands, with no single point of failure.
- 2.5. The proposed system should be 100% non-blocking hybrid Digital exchange using Pulse Code Modulation (PCM) and Time Division Multiplexing (TDM) techniques for Intra Stack and TDM for Inter Stack Communications conforming to CCITT / IEEE recommendations.
- 2.6. The system should have minimum of 2,00,000 Busy Hour Call Completion (BHCC) on converged traffic and provide consistent BHCC irrespective of application Load. System

- BHCC rating should be independent of the features configured on the switch. The BHCC should not degrade with addition of applications like ACD, Networking or Skills Based Routing.
- 2.7. System should have duplication of common control modules including processor memory and other interface modules in the control section, Power Supply, Clock, and Memory. Cross redundancy i.e. redundancy built in for both memory as well as CPU must also be available.
 - 2.8. The Agents of the Call Centre will be at Centralized location at PHQ with facility for remote agents in the District Police Control Rooms. .
 - 2.9. The system should support mix of Analog and Digital Phones.
 - 2.10. The system should be standard 19” rack mountable.
 - 2.11. The system software should be based on a real time Windows based OS.
 - 2.12. The offered system should be capable to provide/connect following:-
 - (a) Integrated Multi Party Audio Conferencing Bridge
 - (b) DECT based Cordless Telephones
 - (c) Analog POTS
 - (e) LAN Connectivity for CTI
 - 2.13. The System should be computer controlled, digital switching device. The System shall incorporate industry standard minimum 32 bit Microprocessors.
 - 2.14. The solution being proposed should have the flexibility to be deployed in different architectures like centralized call processing, multi-site call processing, multi-site distributed call processing, multi-site ACD integration with Network Skills based Routing Option.
 - 2.15. The bidder shall provide complete Contact Centre solution to ensure seamless integration. The components being referred to be ACD, CTI.
 - 2.16. The call centre solution should have the capability to route calls to any location based on resource availability. Across multiple sites the system should have the capability to provide dynamic call routing intelligence before the call is sent to a call centre destination..
 - 2.17. The system should be DC-powered with external rectifier and battery banks operating between -48V to -60V DC or 230 V AC with dedicated UPS backup facility
 - 2.18. The SMPS based rectifier with 1+1 redundancy facility suitable for Main system (with anticipated that the system is fully expanded and battery is fully discharged) should be of a reputed brand.
 - 2.19. The changeover from mains to battery backup and vice-versa should not drop any call in progress.
 - 2.20. Batteries: Sealed maintenance free (SMF) battery cells along with the stand for 08 hours back up power supply at full load of above system (with anticipated that the system is fully expanded) and connected with the FCBC, in float charging mode.

3. CONFIGURATION:

- 3.1. The System shall be configured for the following minimum requirement:-
- 3.2. Digital phones will be installed at different locations at Police Headquarters for which existing wiring will be used. However, defective wiring, if any, will have to be replaced under this contract. Bidders are advised to survey the existing wiring.

4. LAN CONNECTIVITY & NETWORKING:

- 4.1. The equipment shall have the capability to link with Local Area Networks (LAN) to access databases of host computers for Computer Telephony Integration (CTI).
- 4.2. System Administration should be possible across the LAN / WAN connection.
- 4.3. Feature Transparency: In case of a remote unit the system shall provide full feature transparency such as Transfer, Conference, Call forward, Call back etc. to the extensions connected. The remote units shall be centrally manageable from the main console of the main unit.
- 4.4. Media: The remote units should have the option of being configured to be survivable with minimum additional hardware / software and minimum impact on overall network design. Extensions at remote unit should be able to use the trunk facilities on the main unit.
- 4.5. QSIG Compliance: The system shall support QSIG with all supplementary features international signaling standards necessary for multi make/Vendor PABX networking. The OEM should be the member of ECMA forum for QSIG. Bidder to submit documents pertaining to inter-working with other exchanges.
- 4.6. The equipment shall be capable to access existing infrastructure (ISDN) available with the public network service.
- 4.7. The equipment shall support PRI and BRI as recommended by CCITT.
- 4.8. This shall be possible by adding an ISDN Trunk interface card directly to any universal port/ slot of the system.

5. SYSTEM MANAGEMENT:

- 5.1. The GUI based management software must support the telephony management functions for managing telephony networks including fault, configuration management, performance monitoring, and security.
- 5.2. It should be possible to use this system as standalone platform with local and remote access, a terminal server with dial-through capabilities, a centralized platform for management of multiple systems, or in a client-server environment with the database on a file server.
- 5.3. The management Server should also supports serial-to-serial and serial to Ethernet connectivity. Serial to serial connectivity should allow maintaining remote access connectivity via a single modem, eliminating the need for multiple modems.

- 5.4. The management server should provide the wide range of security features including password protection, capabilities, and serial, RAS and WEB access. The dial back mechanism must be supported.
- 5.5. The management software must support FTP file exchange protocol. The management software must support LDAP directory synchronization.
- 5.6. The management software must be able to integrate with Network management software.
- 5.7. The management software must be able to identify all Alarms of the system and provide visibility into all system alarms.
- 5.8. The Office data shall be stored in a memory. The configuration database should have multiple levels of backup like Flash ROM, HDD etc.
- 5.9. The system shall be able to reboot with full memory reload at short time.
- 5.10. Updating of Generic Software shall be possible via any input media. The system software must be the latest available software internationally. The conversions to the latest software release should be supported by previous releases.

6. MAIN DISTRIBUTION FRAME:

- 6.1. Adequate capacity open type Main Distribution Frame (MDF) for termination of exchange side lines floor mounted with provision of Krone-type connectors, connecting cables, isolation strips etc..
- 6.2. Open Type Intermediate Distribution Frame (IDF) to terminate field cables and cross jumper with MDF lines, floor mounted with suitable frame and Krone-type connectors of adequate capacity by inserting Krone module. Both MDF and IDF shall be placed in the same enclosure.
- 6.3. Line Protection Unit: Integrated protection modules and GD tubes on all lines.
- 6.4. Four Krone-type DP with adequate capacity and working space to be installed at 3rd & 4th floor in the corners of the halls.

7. MISCELLANEOUS:

- 7.1 The system should have the following call setup facilities
- 7.2 Speed dialing – both system & personal lists
- 7.3 Automatic Call back, Call Forwarding, Call Pickup, Call Transferring
- 7.4 Conference – Not less than 6 parties.
- 7.5 Calling Number and Name display.
- 7.6 Direct Inward Station Access through password & Direct Inward Dialing.
- 7.7 Distinctive Ringing: Not less than 3 patterns of ringing to distinguish incoming intercom call, incoming external call and ringing for call back feature.
 - a. Call Hold
 - b. Call Park
 - c. Do not disturb
 - d. Station Control password – user defined.
 - e. Scheduled trunk access restrictions.
 - f. Hotlines to extension or trunk as well as delayed hotline.

- g. Display phones should display identity of registering server when in idle state.
 - h. System should allow defining at least 4 levels of extension priority.
 - i. Call waiting option & call wait indication to called party.
 - j. Trunk to trunk access restriction.
 - k. Flexible definition of barred numbers on trunk access for different extensions.
 - l. Trunk access restriction on per user basis.
 - m. Authorization codes for users for enabling trunk access from any extension.
 - n. Differential call completion for internal & external calls.
 - o. Boss Secretarial filtering.
 - p. Message waiting indication (visual or audible) facility on all phones.
 - q. Centralized attendant services.
- 7.8 Service and trunk facilities:
- 7.8.1 Supervisor Right of Way: To intercept busy connections after sending an intrusion tone.
 - 7.8.2 Alphanumeric dialling
 - 7.8.3 Auto attendant users to originate a call by entering a name.
 - 7.8.4 To disconnect a station after a prolonged off hook condition. Loud tone to be sent to the station in the lockout mode. – Howler tone
 - 7.8.5 Music On Hold. Capability to define different music sources for internal & external calls (route dependent)
 - 7.8.6 Malicious Call Tracing: Users shall be able to activate a call trace while either engaged in a conversation or after the calling party goes on hook. The relevant Telephone Numbers of the calling and called parties shall be a printout on the System Message Printer.
 - 7.8.7 The system should support corporate directory look up feature on digital & IP phones.
 - 7.8.8 The system should also have a facility to bar all outgoing calls from all extension based on time.

8 CENTRALIZED ADMINISTRATION AND MAINTENANCE:

- 8.1 The administration, programming and maintenance of the switch should be possible from an admin. PC/ Maintenance console.
- 8.2 A heavy duty A-4 size reputed make laser printer should be provided to get printouts of various Reports.
- 8.3 To enable overall management of the system, it should provide menus in English, without obligation to answer questions with hexadecimal characters/ mnemonics. A Windows application would be desirable.
- 8.4 The switch should have in-built diagnostics capabilities and all error events should get logged and stored in system Hard Disk.
- 8.5 The system should have in built diagnostic features such as Isolation/detection of faulty line/junction/PRI Link and restoration of faulty lines/junctions/PRI Link after rectification.

- 8.6 An audio and Visual indication should also be available at the time of fault occurred in the exchange, any card failure or at the time when PRI line is down/faulty.
- 8.7 Maintenance of the system should be possible over LAN.
- 8.8 The offered system should have remote maintenance facility using dial up connection for remote maintenance with proper password protections.
- 8.9 The system should be provided with a maintenance panel for command input and status display.
- 8.10 The visual indications of the faults should be available at the Maintenance Console in terms of messages.
- 8.11 The system should support remote fault diagnosis up to card level.

9 AUTOMATIC CALL DISTRIBUTION SYSTEM:

- 9.1 The bidder should provide ACD software for 5 agents (upgradeable to 10 agents) for PA-100 operation in call centre.
- 9.2 ACD Software must supports the call routing based on caller ID, Called Number and skill based distribution. (ANI/DNIS, priority queuing, performance criteria and call volume).
- 9.3 System should allow queuing the same call to a skillset as well as an agent. It should allow queuing the call to more than 40 Skill sets simultaneously. System should allow prioritizing of agents as well as calls in queue. Should allow up to 20 priorities for agents & 6 priorities for call.
- 9.4 The system should support “True” Skills Based Routing (Skillsets mapped to agents rather than groups). System should allow more than 40 Skill sets per agent. Agent can be part of a local or network skillset or both. System should be capable of queuing a presented call to a local as well as network skill set.
- 9.5 The system should support Open ODBC Database for enterprise application integration.
- 9.6 The system should provide Customized Agent Phone sets display for effective handling.
- 9.7 The system should have the capability to route the calls based on the off-site telephone numbers.
- 9.8 The system should provide the capability to audibly monitor agent and provide ACD state of the agent.
- 9.9 If there is an available agent that matches the call type the call should immediately be sent to that agent. If there is no available agent the call is placed in queue with music should become active only in case of all the PA-100 agents are busy.
- 9.10 The routing should be possible on the basis of type of helpline (PA-100 calls, women helpline, and student helpline/senior citizen helpline etc.)
- 9.11 The call transfer facility should be available from one position to another.
- 9.12 If a repeat call from the same originator is received, it should land on the same PA-100 position if it is free.

- 9.13 The CTI Interface should provide IP address and related Information for supporting IP Call recording in the Extension side Environment.
- 9.14 The system should be capable of reserving agents for pure outbound calls.
- 9.15 System should have the capability of remote supervision of call Centre agents. The system should provide voice guidance to the Remote caller & allow supervision based on agent ID, skill set or Position ID etc.

10 REAL TIME MONITORING & SYSTEM REPORTS:

- 10.1 The system should provide graphical real time display and historical reporting of the calls to Agents and Supervisors.
- 10.2 The system should provide integrated music/informational recordings to callers waiting in queue. System should be capable of announcing position in queue & expected wait time.
- 10.3 The system should be able to transfer attached data with call and screen pops from one agent to another.
- 10.4 The system should provide TAPI 3.0 or better version compliant CTI interface with native integration adapter availability for popular CRM Applications.
- 10.5 The system should support Flexible Reporting with open DB access for third party reporting tool access like Crystal Reports and other standard reporting tools.
- 10.6 The System should provide for Call-by-Call Reporting in the Nodal and in future across the network call centre.
- 10.7 The ACD system should be capable of providing event based Reporting for each & every call. (Cradle to grave reporting).
- 10.8 Call statistic reports, Call Status Report, Call Audit Report, Call Lost, Calls routed to PA-100, Off hook Delay Report, Call Audit Summary, Calls routed to Enquiry, Trunk Status Report, On Line Trunk Status Report etc. and other reports as required by the user from time to time should be available in the system (various formats such as Excel, Access, Word doc and text format etc.) / monitor as well as printouts. The formats of printouts should be programmable.

11 CALL-CENTER SUPERVISION SOFTWARE AND FEATURES:

- 11.1 It is intended to have 02 supervisor positions software for monitoring and smooth functioning of PA-100 operations.
- 11.2 All the supervisor positions should have the facility of real time monitoring of the status of PA-100 agents including three enquiry positions and subsequently directing any agent found not attending calls promptly.
- 11.3 Supervisor consoles should have the facility of intruding any agent in call centre without knowing the agent being monitored for performance evaluations.
- 11.4 Supervisor should have the facility of direct intrusion to any agent for imparting necessary instructions as and when required.

- 11.5 The Graphical Real-time Display should provide information in the following formats:
- a. Billboard: a numeric display of a selected statistic which can be scaled to fill a data window
 - b. Selective statistical performance charts (vertical/horizontal bar chart, pie chart, vertical horizontal plot chart, time chart)
 - c. Map (optional): represents the physical layout of a call center, in two-dimension space, reflecting agent status
 - d. Collection: a collection of up to 6 displays (three tabular and three graphical) on one screen
 - e. Thresholds and highlighting
- 11.6 The real-time displays offer data to be collected in the following categories:
- a. Agent Display, Skill set Display, ACD-DN, Route Display
 - b. Network Call Display, Call Center Summary Display
- 11.7 Real-time displays provide the supervisor to create their own formulas. After the formula is saved, the calculations are performed in real-time on the client PC. Supervisors can customize the columns so that all of their formulas and data requirements are captured.
- 11.8 Information should also be viewed via the Graphical Real-time Display (GRTD).
- 11.9 The GRTD should offer the following different types of displays:
- a. Billboard - numerical display of a selected performance statistic (in large easy-to-read font)
 - b. Chart - selective statistical performance charting
 - c. Vertical Bar Graph (individual bar), Horizontal Bar Graph (individual bar)
 - d. Pie Graph, Vertical & Horizontal Line Graphs
 - e. Map (optional) - visual representation of selected agent states by their physical call center position
 - f. Collection - choice of 6 displays (three tabular and three graphical) appearing in a collection on one browser window (see figure 7 below)
- 11.10 With the GRTD, supervisors can select the type of Real-time Statistics that they want displayed in the format of their choice:
- a. Nodal, Application and Skill set statistics can be displayed in Billboard and Chart format
 - b. Agent Statistics can be displayed in the Map format.
- 11.11 To handle calls with optimum efficiency, agents must have quick access to supervisors for answers to questions and help in emergencies. In addition to having access to the many agent telephone set features such as answering incoming skill set calls on an In Calls key, supervisor telephone set features offer call centre supervisors the ability to provide agents assistance in treating callers to exceptional service. Provided below is a list of call centre telephone set features available to supervisors.
- 11.12 Display Waiting Calls: Supervisors should be able to view real-time information about their active skill sets by pressing the Display Waiting Calls key. The supervisor's telephone should display the number of calls currently waiting in all the active skill set queues defined for that supervisor, the number of agent positions manned for the active skill set queues with which the supervisor is associated, and the waiting time of the oldest call in the supervisor's active skill

- set queues. If the skill set queues are backlogged, the supervisor can encourage agents to revise operating procedures so all callers will be served more promptly.
- 11.13 **Display Agents:** A supervisor should be able to monitor agents' performance in real time from the telephone set by using the Display Agents key. Activation of this key shows the number of agents who are currently busy, waiting for calls or engaged in personal directory number calls and the number of spare agent positions.
 - 11.14 **Individual Agent Keys:** Individual Agent keys can provide supervisors with a close-up view of agent performance that may not be apparent from overall traffic patterns.
 - 11.15 **Call Agent:** The Call Agent key allows a supervisor to call an agent in an effort to establish communication. After pressing the Call Agent key, a supervisor can call the agent by pressing the associated Agent key or by dialing the agent's position ID. The agent is alerted that the call is from a supervisor because the Supervisor key is illuminated.
 - 11.16 **Answer Agent:** If an agent requires assistance from his or her supervisor by activating the Supervisor key, the call rings on the supervisor's telephone at the Answer Agent key. With a quick glance, the supervisor knows that the call is from an agent.
 - 11.17 **Answer Emergency:** When an agent presses the Emergency key, the supervisor's telephone emits a continuous tone and the Answer Emergency key flashes. The supervisor can then connect directly to the agent and the call by pressing the Answer Emergency key.
 - 11.18 **Agent Observe:** The Agent Observe feature enables a supervisor to listen to an agent's conversation with or without being heard by the parties on the call. An optional tone is available to alert the agent and, if desired, the caller that the call is being monitored. The observing supervisor can also enter the call and initiate a conference.

12 CTI APPLICATIONS:

- 12.1 The bidder must quote open standard CTI application and protocols for smooth integration with GIS/GPS based AVTS.
- 12.2 The offered system should support CTI applications (Computer Telephony Integration) for features like Screen Popup through CLI or DNIS (Dialed Number Identification Service).
- 12.3 All necessary strings/codes/ help is required, to be provided by the supplier for the integration of CTI application, supplied by the vender of GIS/GPS based AVTS, if any.
- 12.4 **ANALOG Handset Features:**
- 12.5 **Caller Line Identification (CLI) of distress caller, Dialed Extension, Call routed extension etc. should be displayed along with the real time.**
 - 12.5.1 Moving service – without any intervention by the maintenance people, subscriber should be able to move to a new location and by dialing codes at the new locations, he should retain his existing number.
 - 12.5.2 Padlock with password protection on all telephone terminals.

- 12.6 **INTERFACE APPROVAL FROM TEC/DOT:** The proposed switch should be compatible with the Public Switched Telephone Network in all 6 locations. The proposed switch should be approved from the TEC/DOT for the required configuration and interfaces. A copy of the TEC approval certificate should be attached with the Technical bid.

CHAPTER – 6
PROFORMA FOR PRICE SCHEDULE

(Enclose with commercial bid)

TENDER NO.

Date of opening..... TimeHrs.

We—————hereby certify that we are established manufacturers/authorized representatives of M/s—————with factories at —————which are fitted with modern equipment and where production methods, quality control and testing of all materials manufactured or used by us are open to inspection by the representative of the Purchaser. We hereby offer to supply the following items at the prices indicated below:

S. No.	Description of work/item with make & model no.	Qty.	Unit Price In Indian Rupees	Sales Tax/ VAT In Indian Rupees	Other Govt. Levies, if any (To be specified)	Incidental charges, if any (To be specified)	Unit Price FOR Destination Including all taxes In Indian Rupees	Extended Price FOR Destination In Indian Rupees ('c' x 'h')	AMC Rates In INR
a	b	c	d	e	f	g	h	i	j

It is hereby certified that we have understood all the terms and conditions specified in the tender document and are thoroughly aware of the nature of job required to be done and Stores/items to be supplied. We agree to abide by all the tender terms and conditions and we hereby offer to carry out the job and (or) supply the Stores/items/ services detailed above or such portion(s) thereof as you specify in the notification of award.

The Total Cost of Outright Purchase component (Item 1,2,3.1& 3.2 of schedule of requirement) **SUB TOTAL-A** =Rs.(In figures & words)

The annual rates and Total 3 year Cost of Rental component (Item 3.3& 3.4 of schedule of requirement) **SUB TOTAL-B** =Rs.(In figures & words)

The AMC rates and Total Cost of AMC for the Hardware and Software for 3Years after warranty **SUB TOTAL-C** =Rs.(In figures & words)

The Total Project Cost including System, 3years rental & 3years warranty components (**SUB TOTAL-A + B + C**) =Rs.(In figures & words)

(Signature and seal of Bidder)

CHAPTER-7

Contract Form

CONTRACT No. _____

This Contract made on the ----- day of -----, (hereinafter referred to as the “**Contract Date**”) between the President of India acting through the Director of Police, Punjab Police (hereinafter referred to as the “**Purchaser**” which term will include its representatives, successors and permitted assignees) of the one part and M/s -----, a Company incorporated under the Companies Act, 1956 and having its office at ----- (hereinafter referred to as the “**Supplier**” which term will include its representatives, successors and permitted assignees) of the other part.

WHEREAS

- A. The Purchaser is desirous to procure ----- (hereinafter referred to as the “**Stores**”) for Punjab Police and had sought a commercial offer for the supply of the System.
- B. With respect to the enquiry issued by the Purchaser -----, the Supplier had submitted its Commercial Bid dated -----
- C. The Purchaser has accepted the Supplier’s Commercial offer read with the clarifications/confirmation (if any) submitted by the Supplier vide letter ----- for the supply of the Stores and associated services at a total cost of Indian Rs.-----/- (Indian Rupees -----only).

NOW, THEREFORE, in consideration of the mutual promises and covenants contained herein, the parties agree as follows:

- 1. **DEFINITIONS OF TERMS:** In this Contract, capitalized words will have the same meaning as respectively assigned to them in the conditions of Contract herein.

- 7. **CONTRACT DOCUMENTS:** The following documents, (each a “**Contract Document**” and collectively, the “**Contract Documents**”) are hereby expressly incorporated into this Contract and shall form and be read and construed as part of this Contract viz: -

- Exhibit-A: Tender enquiry No.----- dated -----
- Exhibit-B: Suppliers Technical offer dated -----
- Exhibit-C: Supplier’s commercial offer dated -----
- Exhibit-D: Supplier’s written clarification and confirmation letter dated -----
--- (if any)
- Exhibit-E: Purchaser’s Letter of Intent No-----/ T (W)/DSP/Comn dated-----

- 2.2 **Order of Precedence:** In case of conflict between the terms in this Contract and the Contract Documents, the terms of this Contract shall prevail. In case of conflict between the terms in any two Contract Documents, the Contract Document mentioned later in the above list shall prevail.

3. **SCOPE OF WORK:** The **Scope of Work** shall include **supply**, delivery at site, unloading, any other services associated with the delivery of equipment and materials, **installation, commissioning**, software optimization, digital maps of concerned areas providing **warranty/post warranty services** for the Stores/Equipment, identifying communication Service Provider & getting suitable data channels on rental basis and any other related accessories/services for the complete installation and commissioning of the System, as per the Schedule of Requirements and Technical Specifications of the tender. The successful bidder will assume full responsibility of the complete System until final acceptance.

4. CONTRACT PRICE

4.1 The prices for supply of the Stores and other associated services is detailed specifically in the Supplier's Commercial offer (Exhibit-B) read with Supplier's written clarification and confirmation letter dated -----(Exhibit-C). The contract price is Indian Rs.-----/- (Indian Rupees ----- only). This price excludes existing Central Sales Tax/Service Tax as applicable and any new Government levies/taxes imposed in India after the Contract Date, which the Purchaser shall bear and pay at actuals.

4.2 Sales Tax @ ----- against form-D as applicable on items ----- of Exhibit-C of the Contract.

5. CONTRACT PERFORMANCE BANK GUARANTEE
6. PAYMENT SCHEDULE
7. PACKING, FORWARDING & SHIPMENT
8. DELIVERY
9. INSURANCE
10. INSPECTION AND TESTS
11. GUARANTEE/WARRANTY
12. POST-WARRANTY SERVICES AND MAINTENANCE
13. TRAINING
14. SPARE PARTS
15. SITE PREPARATION
16. RESPONSIBILITY OF COMPLETION
17. DELAY IN THE SUPPLIER'S PERFORMANCE
18. LIQUIDATED DAMAGES
19. FORCE MAJEURE
20. PATENT INDEMNIFICATION
21. WAIVER
22. ASSIGNABILITY
23. SEVERABILITY
24. GOVERNING LAW
25. TERMINATION FOR DEFAULT
26. TERMINATION FOR INSOLVENCY
27. TERMINATION FOR CONVENIENCE
28. RESOLUTION OF DISPUTES

(The clauses 5 to 28 shall be according to the Chapter 2: Conditions of Contract of this Tender)

29. **ENTIRE CONTRACT:** This Contract including the Contract Documents constitute the final expression of agreement between the parties and supersedes all

previous agreements and understandings, whether written or oral, relating to the Contract. This Contract may not be altered, amended, or modified except in writing, signed by the duly authorized representatives of both parties.

IN WITNESS WHEREOF, the parties hereto have caused this Contract to be executed by their duly authorized representatives as of the last day and year written below:

Signed by:	Signed by:
Name:	Name:
Title:	Title:
Date:	Date:
For and on behalf of The President of India	For and on behalf of
<i>Witness</i>	<i>Witness</i>
Signature:	Signature:
Name:	Name:
Address:	Address:
Date:	Date:

CHAPTER - 8

OTHER STANDARD FORMS

ANNEXURE-T1

BIDDER PARTICULARS
(Enclose with Technical Bid)

1. Name of the Bidder :

 2. Address of the Bidder :

 - 3 Name of the Manufacturer(s) :

 4. Address of the Manufacturer :

 5. Name & address of the person to whom all references shall be made regarding this tender enquiry. :
- Telephone :
- Fax :
- E-mail :

Witness:

Signature

Signature

Name

Name

Address

Designation

Date & Company Seal

BID FORM
(Enclose with Technical Bid)

Date: ___/___/___

The Managing Director
Punjab Police Housing Corporation,
SCO 171-72, Sector 8-C,
Chandigarh-160018

Sir,

Having examined the Bid Documents of **TENDER NO.** _____
We, _____, offer to supply and
deliver _____
(Name of the Firm)

(Description of Stores and Services)

in conformity with the said tender provisions for sums as may be ascertained in accordance with the Schedule of Prices provided in the Commercial Bid.

We undertake, if our bid is accepted, to complete delivery, installation and commissioning of the System as per the schedule specified in the Tender.

We further undertake that, if our bid is accepted, we will obtain the Guarantee of a Scheduled Bank in a sum equivalent to 10% of the Contract Price for the due Performance of the Contract as per **terms and conditions** of the Tender.

We agree to abide by this bid for a period of 180 days from the date fixed for bid opening and it shall remain binding upon us and may be accepted at any time before the expiration of that period. This bid together with your written acceptance thereof and your notification of award shall constitute a binding Contract between us.

We have noted the contents of Contract Form (Chapter 6) and agree to abide by terms and conditions in the same.

We understand that you are not bound to accept the lowest or any bid you may receive. We also understand that you have the right to vary the quantities and/or split the total order among the Bidders and/or procure the available and compatible items/equipments under DGS&D Rate Contract.

SIGNATURE AND SEAL OF BIDDER

G U A R A N T E E
(Enclose with Technical Bid)

The Managing Director
Punjab Police Housing Corporation,
SCO 171-72, Sector 8-C,
Chandigarh-160018

Ref: TENDER NO. -----

We guarantee that everything to be supplied and fabricated by us hereunder shall be brand new, free from all encumbrances, defects and faults in material, workmanship and manufacturer and shall be of the highest grade and quality and consistent with the established and generally accepted standards for materials of the type ordered and shall be in full conformity with the specifications, drawings or samples, if any, and shall operate properly. We shall be fully responsible for its efficient and effective operation. This guarantee shall survive inspection of and payment for, and acceptance of the goods, but shall expire **36 months** after their acceptance by the Purchaser.

The obligations under the Guarantee expressed above shall include all costs relating to labour, repair, maintenance (preventive and unscheduled), and transport charges from site to manufacturers' works and back and for repair/adjustment or replacement at site of any part of the equipment/ item which under normal care and proper use and maintenance proves defective in design, material or workmanship or fails to operate effectively and efficiently or conform to the specifications and for which notice is promptly given by the Purchaser to the Supplier.

SIGNATURE OF THE WITNESS
BIDDER

SIGNATURE AND SEAL OF

DATE _____

Company details for eligibility criteria (Clause 2, Chapter-1)
(On applicant Company/leading company's Letterhead)
(Enclose with Technical bid)

The Managing Director
Punjab Police Housing Corporation,
SCO 171-72, Sector 8-C,
Chandigarh-160018

Sub: Tender for GIS/GPS based Vehicle Tracking System for Punjab Police.

Dear Sir,

We would like to clearly state that we qualify for this work as our company/JV/Consortium of companies meets all the eligibility criteria of the tender. The details are as under:

Eligibility Criterion	Details		
1. Turnover of the company during the last three years.	Financial year		Rupees in Crores
	2008-09	Company/ Leading Company	Consortium of Companies
	2007-08 2006-07		
2. Copy of the Certificate of Incorporation with the copy of Articles and Memorandum of Association	Yes/No		
3. Address and contact numbers of technical support office in Mohali/Chandigarh			
4. Number of key persons who have sufficient experience to develop and implement customized GPS, GIS and web-based applications alongwith the Organizational Chart. (Attach separate statement indicating names, qualifications, experience and skills sets and details of projects handled)	(No. of Persons)		
5. Whether at least one similar projects of value worth Rs. 1 crores has been successfully completed nationally. (Enclose the list of projects and attach necessary documentary proofs alongwith addresses & telephone numbers of clients nationally.	Yes/No		
6. Whether you have proven experience in the	Yes/No		

field of development of customized IT applications integrating GPS, GIS and Web technologies? (Enclose the list of projects and attach necessary documentary proofs.)	
7. Whether draft Service Level Agreement (SLA) has been attached or not?	Yes/No

We understand that if the details given in support of claims made above are found to be untenable or unverifiable or both, our bid may be rejected without any reference to us.

Yours sincerely

(Signature, Name, designation, contact address and telephone number of the authorized signatory)

Seal

ANNEXURE – T5

PROFORMA FOR SALES TAX CLEARANCE CERTIFICATE
(Enclose with Technical bid)

OFFICE OF THE SALES TAX OFFICER, WARD-.....
SALES TAX DEPARTMENT,

No. _____
Dated _____

Sales Tax Clearance Certificate

Certified that M/s. _____

is a registered Company of this ward having Registration No. _____

The Company is assessed upto _____ and there are no dues pending against the said Company as on date.

This certificate is issued on the written request of the company, dated _____ for submission of tender purposes only.

This certificate is valid up _____

Signature & Seal of
SALES TAX OFFICER

WARD
DATE:

ANNEXURE – T6**CHECK LIST - TECHNICAL BID**
(Enclose with Technical Bid)

- | | | |
|-----|--|--------|
| 1. | Have you enclosed the tender fee? | Yes/No |
| 2. | Have you furnished bidder's particulars furnished as per Annexure-T1? | Yes/No |
| 3. | Have you furnished Bid Form (Annexure-T2)? | Yes/No |
| 4. | Have you furnished Bid security (Earnest Money)? | Yes/No |
| 5. | Have you filled in Chapter 4 (Technical Specs)? | Yes/No |
| 6. | Have you enclosed un-priced Schedule of Requirement giving details of Stores quoted? | Yes/No |
| 7. | Are you offering the goods & services as per delivery schedule? | Yes/No |
| 8. | Have you furnished the Manufacturer's Authorization? | Yes/No |
| 9. | Have you enclosed Tax registration certificate and clearance certificate as per enclosed Performa? | Yes/No |
| 10. | Have you furnished the guarantee for supply of spares in the post warranty period? | Yes/No |
| 11. | Have you signed and sequentially numbered each page of your Bid? | Yes/No |
| 12. | Have enclosed the certificate as per clause 10.3? | Yes/No |
| 13. | Have you noted the contents of Contract Form (Chapter 6)? | Yes/No |
| 14. | Have your furnished company details for eligibility criterion? | Yes/No |

Annexure - T-7

Technical specifications cross reference matrix

The supplier shall provide technical specifications cross reference matrix stating verified and tested at stage and remarks before final acceptance of the system as per the given Performa.

Sl. No.	Technical specifications and system requirement as per tender document	Verified and tested at stage i.e. ATP/Demo	Verified at OEM level as per test certificate No.	Remarks
---------	--	--	---	---------

ANNEXURE- C1

BID LETTER
(Enclose with Commercial Bid)

The Managing Director
Punjab Police Housing Corporation,
SCO 171-72, Sector 8-C,
Chandigarh-160018

Ref: Tender No. _____

Sir,

We declare:

1. a) That we are manufacturers / authorized agents of _____.
b) That we /our principals are equipped with adequate machinery for production, quality control and testing of materials manufactured and used by us and that our factory is open for inspection by your representatives.
2. We hereby offer to supply the Stores at the prices and rates mentioned in the Commercial Bid at **Chapter 6**.
3. Period of Delivery: We do hereby undertake, that in the event of acceptance of our bid, the **supply of Stores** shall be completed at site within **60 days** from the date of Award of Contract, and that we shall perform all the incidental services as per contract.
4. Terms of Delivery: The prices quoted are inclusive of all charges upto delivery at all the location (site) to be indicated by Punjab Police.
5. We enclose herewith the complete Commercial Bid as required by you and also enclosed the Check List.
6. We agree to abide by our offer for a period of **180 days** from the date fixed for opening of the financial Bids and that we shall remain bound by a communication of acceptance within that time.
7. We have carefully read and understood the terms and conditions of the tender and the conditions of the Contract applicable to the tender and we do hereby undertake to supply as per these terms and conditions.
8. Certified that the Bidder is:
a sole proprietorship firm and the person signing the tender is the sole proprietor/constituted attorney of the sole proprietor, or
a partnership firm, and the person signing the tender is a partner of the firm and he has authority to refer to arbitration disputes concerning the business of the partnership by virtue of the partnership agreement/by virtue of general power of attorney, or
a company and the person signing the tender is the constituted attorney.
NOTE: Delete whatever is not applicable. All corrections/ deletions should be duly attested by the person authorized to sign the tender document.
9. We do hereby undertake, that until a formal Contract is prepared and executed, this bid, together with your written acceptance thereof and placement of letter of intent awarding the contract, shall constitute a binding Contract between us.
Dated this _____ day of _____ 2009.

Signature of the Bidder

Details of enclosures:

Full address:

Telephone No.
Mobile No.
Fax No.
Email address:

ANNEXURE – C2

PROFORMA FOR CONTRACT PERFORMANCE BANK GUARANTEE
 (To be stamped in accordance with Stamp Act)
(Enclose with Commercial Bid)

Bank Guarantee No _____
 Ref _____

Date _____

To,

The Managing Director
 Punjab Police Housing Corporation,
 SCO 171-72, Sector 8-C,
 Chandigarh-160018

Dear Sir,

In consideration of the Managing Director, Punjab Police Housing Corporation, Chandigarh for Punjab Police, (hereinafter referred to as the 'Purchaser' which expression shall unless repugnant to the context or meaning thereof include its successors, administrators and assignees) having awarded to M/s _____ with its Registered/ Head Office at _____ (hereinafter referred to as the 'Contractor' which expression shall unless repugnant to the context or meaning thereof, include its successors, administrators, executors and assignees), a Contract by issue of the Purchaser's letter of intent No. _____ dated ___/___/___ entering into a formal contract to that effect with the Purchaser on _____ vide Agreement No. _____ (hereinafter referred to as the "Contract") and the Contractor having agreed to provide a Contract Performance Bank Guarantee for the faithful performance of the entire Contract equivalent to _____ * _____ Ten percent of the said value of the Contract to the Purchaser.

We _____ (Name & Address of the bank) having its Head office at _____ (hereinafter referred to as the 'Bank' which expression shall, unless repugnant to the context or meaning thereof, include its successors, administrators, executors and assignees) do hereby guarantee and undertake to pay the Purchaser, on mere demand any and all moneys payable by the Contractor to the extent of Rs _____ * _____ as aforesaid at any time up to _____ (day/month/year) without any demur, reservation, contest, recourse or protest and/or without any reference to the Contractor. Any such demand made by the Purchaser on the Bank shall be conclusive and binding notwithstanding any difference between the Purchaser and the Contractor or any dispute pending before any court, Tribunal, Arbitrator or any other authority. The Bank undertakes not to revoke this guarantee during its currency without previous consent of the Purchaser and further agrees that the guarantee herein contained shall continue to be enforceable till the Purchaser discharges this guarantee.

The Purchaser shall have the fullest liberty without affecting in any way the liability of the bank under this guarantee, from time to time to extend the time for performance of the contract by the Contractor. The Purchaser shall have the fullest liberty, without affecting the guarantee, to postpone from time to time the exercise of any powers vested in them or of any right which they might have against the Contractors, and to exercise the same at any time in any manner, and either to enforce or to forbear to enforce any covenants, contained or implied in the Contract between the Purchaser and the Contractor or any other course or remedy or security available to the Purchaser. The bank shall not be relieved of its obligations under these presents by any exercise by the Purchaser of its liberty with reference to the matters aforesaid or any of them or by reason of any other act or forbearance or other acts of omission or commission on the part of the Purchaser or any other indulgence shown by the Purchaser or by any other matter or thing whatsoever which under law would, but for this provision, have the effect of relieving the bank.

The Bank also agrees that the Purchaser at its option shall be entitled to enforce this Guarantee against the Bank as a principal debtor, in the first instance without proceeding against

the Contractor and notwithstanding any security or other guarantee that the Purchaser may have in relation to the Contractor's liabilities. We undertake to pay to the Government any amount so demanded by the Government, notwithstanding.

- a) any dispute or difference between the Government or the Contractor or any other person or between the Contractor or any person or any suit or proceeding pending before any court or tribunal or arbitration relating thereto; or
- b) the invalidity, irregularity or un-enforceability of the contract; or
- c) in any other circumstances which might otherwise constitute discharge of this Guarantee, including any act of omission or commission on the part of the Government to enforce the obligations by the Contractors or any other person for any reason whatsoever.

We, the Bank further agree that the guarantee herein contained shall be continued on and remain in full force and effect during the period that would be taken for the performance of the said Agreement and that it shall continue to be enforceable till all the dues of the Government under or by virtue of the said agreement have been fully paid and its claims satisfied or discharged or till the Purchaser, certifies that the terms and conditions of the said Agreement have been fully and properly carried out by the said Contractor(s) and accordingly discharges this guarantee.

We _____ hereby agree and undertake that any claim which

(indicate the name of the bank)

the Bank may have against the Contractor shall be subject and subordinate to the prior payment and performance in full of all the obligations of the Bank hereunder and the Bank will not without prior written consent of the Government exercise any legal rights or remedies of any kind in respect of any such payment or performance so long as the obligations of the Bank hereunder remain owing and outstanding, regardless of the insolvency, liquidation or bankruptcy of the Contractor or otherwise howsoever. We will not counter claim or set off against its liabilities to the Government hereunder any sum outstanding to the credit of the Government with it.

Notwithstanding anything contained herein above our liability under this guarantee is limited to total amount of Rs _____*_____ and it shall remain in force upto and including _____**_____ and shall be extended from time to time for such further period as desired by M/s _____ on whose behalf this guarantee has been given.

Dated this _____ day of _____ 2006 _____ at

WITNESS

(Signature) _____

(Signature) _____

(Name) _____

NAME _____
(Official address) _____

(Banker's Rubber Stamp) _____

Attorney _____

Attorney as per Power of

* This sum shall be ten percent (10%) of the Contract Price.

** The date will be 01(one) year and six months from the date of award of the contract. In case of Bank guarantee issued by a Foreign Bank, the same shall be confirmed by any Scheduled Bank in India.

Annexure-C3**Breakup of the Spares quoted in the Price Schedule (Chapter-6)
(Enclose with Commercial Bid)**

Bid No. _____

Sl. No	Description Of spare parts	Part No.	Qty. Offered	Unit Price in Indian Rupees	Total Price FOR Destination in Indian Rupees

Signature and Seal of the Bidder

DATE _____

Annexure – C4

CHECK LIST - COMMERCIAL BID

(Enclose with Commercial Bid)

- | | | |
|----|---|--------|
| 1. | Have you furnished the Bid Letter? (Annexure C1, Chapter 7) | Yes/No |
| 2. | Have you filled in the Price Schedule? (Chapter 5) | Yes/No |
| 3. | Have you enclosed the Performa for Contract
Performance Bank Guarantee? (Annexure C2, Chapter 7) | Yes/No |
| 4. | Have you quoted for all the items as per Chapter 3 ? | Yes/No |
| 5. | Have you quoted the AMC charges for a period of seven years
after the warranty period? | Yes/No |