



Request for Proposal

For

Selection of System Integrator for
Information and Communication
Technology (ICT) Up gradation and
Enablement of Fire Services in
Bhopal Smart City

Reference No:MPBSCDCL/TENDER NO- 104

Oct-2019

Bhopal Smart City Development Corporation Ltd.
Bhopal, Madhya Pradesh

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Bidding Data Sheet/NIT

S. No	Particulars	Details
1.	Name of Client	Bhopal Smart City Development Corporation Limited (BSCDCL)
2.	Name of the Engagement	Request For Proposal Selection of System Integrator for Information and Communication Technology (ICT) Upgradation and Enablement of Fire Services in Bhopal Smart City
3.	Availability of the document	RFP is available and downloadable on MP e-procurement portal: (http://www.mptenders.gov.in) All subsequent changes to the RFP shall be published on the above mentioned website.
4.	Start date for Purchase of RFP	<04-10-2019> at <17:00hrs>
5.	Last date for Purchase of RFP	<04-11-2019> at <17:00hrs>
6.	Cost of RFP Document	INR 20,000/-(Twenty thousand rupees only) to be paid online through e- Procurement portal
7.	Sharing of pre-bid queries	Pre bid queries to be shared at bscdcl@smartbhopal.city by 15-10-2019
8.	Pre-Bid Meeting	12:00 hours to be held at 15-10-2019
9.	Earnest Money Deposit (EMD)	INR 7.00 Lacs (Seven Lacs rupees only) to be paid online through e- Procurement portal (Please note that no exemption for EMD will be accepted)
10.	Last date of submission of Proposal	Online at https://mptenders.gov.in - <04-11-2019> at <17:30 hrs>
11.	Last date of hardcopy submission	<05-11-2019> at <12:00 hrs>
12.	Date and Time of opening of Prequalification Proposal and Technical Proposal	<05-11-2019> at <15:00 hrs>
13.	Presentation on technical solution by bidders	To be intimated to the successful bidder
14.	Date of opening of Financial proposal	To be intimated to the successful bidder
15.	Email Address	The prospective Bidder requiring any clarification to the RFP shall contact BSCDCL through email by sending the queries at bscdcl@smartbhopal.city
16.	Address for Communication	Office of Chief Executive Officer Bhopal Smart City Development Corporation Limited, Zone 14, near Tatpar petrol pump, BHEL Govindpura, Bhopal, Madhya Pradesh- 462023 Phone: 0755- 2477770

1. Section I: Introduction and Background

1.1 About BSCDCL and BMC

Bhopal is among the first 20 cities selected in first round of smart cities challenge under Government of India's (GoI) smart cities mission (SCM) to implement the smart city proposal (SCP). In this context, Bhopal has incorporated a special purpose vehicle (SPV) – Bhopal Smart City Development Corporation Limited (BSCDCL) (the “Authority”) to plan, design, implement, coordinate and monitor the smart city projects in Bhopal. BSCDCL is a company incorporated under Indian Companies Act 2013 with equal shareholding from Madhya Pradesh Urban Development Company Limited (MPUDCL) on behalf of Government of Madhya Pradesh (GoMP) and Bhopal Municipal Corporation (BMC).

Bhopal Municipal Corporation (BMC) presently manages the **fire prevention and firefighting service** aspect of the city, which covers approximate area of 450 sq.km. Serving a population of over 2,371,061.

1.2 About the Project

The number of Fire incidents and disasters recorded in recent years has been steadily rising in Bhopal city. Traditional methods of fire detection & communication have proven to be ineffective during time of fire incidents. Presently, the fire incidents in the city are being notified via emergency call no. 101 or through fire station numbers. The information of the reported incident is then shared with the fire department officials for their furtherance and dispatch of the vehicle at the incident site.

Presently, the Bhopal Municipal Corporation (BMC) controls the emergency services related to water/fire through their 11 fire stations and fleet of 27 fire fighting vehicles, 4 water tank, 1 hydraulics, 10 ambulances and 4 motorcyclebased emergency response service.

Bhopal Smart City Development Corporation Limited (BSCDCL) is under process of implementation of Integrated Command & Control Center (ICCC) project which envisaged commissioning and integration of various city services as a part of scope of work. Subsequently, converting the fire service infrastructure to Smart Fire Station and Tenders shall be done and integration of full-fledged ICT enabled fire services has to be integrated with the ICCC system.

In this regards, BSCDCL wishes to upgrade and enable the Information & Communication Infrastructure of Firefighting Service Department. This shall act as a step forward toward providing the citizens with effective, efficient and timely firefighting services in the city thereby ensuring the safety and security in emergency situations.

1.3 Project objectives

The key objective of this project:

1. Development of Integrated Application Platform (IAP) for Firefighting Department.
2. ICT Upgradation of Fire Fighting Fleet.
3. Setting up of Central Fire Control Station (CFCS) infrastructure at Fatehgarh Station (Head Quarter) and Fire Control Station (FCS) infrastructure at 10 Sub Stations.
4. The IA would be required to host the Fire Application on a Cloud environment using any Cloud Service Provider.
5. Integration of Emergency Call Service (101), Bhopal Plus App, CM Helpline and BMC Contact Center with CFCSs and FCSs

6. Support in integrating the CFCS's and FCS's with Integrated Command & Control Center presently being developed under BSCDCL.
7. Provisioning of IP based internet connectivity for information/data sharing within all the ICC, CFCSs, and FCSs.
8. Comprehensive Maintenance of the envisaged services for 3 years.

2. Section II: Instructions to Bidders

This section specifies the procedures to be followed by Bidders for the preparation and submission of their Bids. It is important that the Bidder carefully reads and examines all the terms and condition of this RFP

2.1 General

- From the time of bid advertisement to the time of Contract award, if any Bidder wishes to contact the BSCDCL (or designated officer) on any matter related to the bid, it should do so in writing at the address mentioned in Bid Fact Sheet.
- The Bidder shall bear all costs associated with the preparation and submission of its Bid, and the BSCDCL shall not be responsible or liable for those costs, regardless of the conduct or outcome of the bidding process.
- Bidders should submit only one Bid.
- The Bids shall remain valid for the period of 180 days after the bid submission deadline date prescribed by the BSCDCL.
- In exceptional circumstances, prior to the expiration of the bid validity period, the BSCDCL may request Bidders to extend the period of validity of their bids. In case of Bidder extending of the bid, the Bidder granting the request shall also extend the bid security for forty-five (45) days beyond the deadline of the extended validity period.
- Any bid NOT accompanied by an enforceable and compliant bid security (EMD) may be rejected by the BSCDCL as non-responsive.
- The bid security of unsuccessful Bidders shall be returned as promptly as possible upon award of contract to the successful Bidder. No interest will be payable by the BSCDCL on the amount of the Bid Security.
- The bid security of the unsuccessful Bidder shall be returned as promptly as possible once the successful Bidder has signed the Contract and furnished the required performance security.
- The bid security will be forfeited by BSCDCL on account of one or more the following reasons:
 - If a bidder withdraws its bid during the period of bid validity
 - If the successful bidder fails to sign the contract in accordance with terms and conditions of this RFP.
 - In the case of a successful bidder, if the Bidder fails to sign the Contract or to furnish Performance Bank Guarantee within specified time

2.2 Consortium Condition

- *The number of consortium members cannot exceed two, including the Prime Bidder.*
- A Bidder applying individually or as consortium member shall not be entitled to submit another application either individually or as a member of any other consortium, as the case may be.
- Consortium members must provide a Memorandum of Understanding (MoU) covering above points and showing their intention to enter into such an Agreement at the time of bidding along with Pre-Qualification Bid.

- A Bidding Consortium is required to nominate a Prime Member. The formation of the consortium including identification of Prime member and role and responsibilities of each member shall be supported by Memorandum of Agreement and Power of Attorney signed by all the members on a stamp paper of INR 100/-.
- The successful bidder (SI) shall require to enter into agreement with the Consortium Member specifying following points in the Agreement. These points shall also be captured in MoU
 - a. Identity Prime Member and Power of Attorney in favor of Prime Member.
 - b. Roles and responsibilities of the consortium partner, the identification of the lead partner, and providing for joint and several liability for each partner.
 - c. All consortium members would be available throughout the Contract Period.
 - d. The Prime bidder shall be jointly and severally responsible for complete scope, whereas consortium partner shall be severally responsible only for its respective scope.
 - e. The role and responsibility of any member must be commensurate with the technical/financial capabilities that such member is contributing towards meeting the qualification criteria. Each consortium member is liable to contribute resources in terms of knowledge, skills and trained manpower commensurate with its role and responsibilities during the Contract Period.
 - f. The Consortium Agreement must also state that the period of the Agreement would coincide with the Contract period. Consortium must continue to be in existence during the period of the contract and that any change will be subject to approval of the Authority (BSCDCL) only.
 - g. The final contract between the consortium members (The Consortium Contract) would be available for legal vetting and open to suggestions by the BSCDCL. BSCDCL will suggest binding corrections if it finds that such contract does not meet its requirements and interests as per the Tender in letter and spirit.
 - h. The Agreement should be on stamp paper and notarized. The signatories must be duly authorized.
 - i. Any modification in roles and responsibilities between consortium members during Contract Period shall be allowed only after approval from BSCDCL. Any changes and deviation of roles and responsibilities of consortium members during the execution, operation and maintenance of this Project without prior approval of Authority shall be viewed seriously by the BSCDCL as it can affect an important public service. Such unilateral action by the SI shall entitle BSCDCL to take appropriate action including considering it an Event of Default under this Contract leading to consequences including termination with appropriate notice.
 - j. Any Dispute arising during Contract Period between the Consortium Member shall be resolved amicably without adversely impacting Project execution, implementation or operation. If in BSCDCL's opinion, Dispute between Consortium members adversely impacting implementation and operation of the Project then Authority may its sole discretion in the interest of the Project (a) Terminate the Contract after due process and/or (2) Provide a binding solution.
 - k. In case BSCDCL Intends to proceed for Termination on account of System Integrator Event of Defect and /or unresolved disputes between the Consortium Members, all the Consortium Members shall be jointly and severally liable for Implementation, Operation and Maintenance of project at Agreed prices and payment terms specified in this Tender till Authority or any new agency appointed by it takes over the Project
 - l. BSCDCL reserves the right to reject the Bid in case of change in the constitution of the consortium after the submission of Bid and before the execution of the Agreement

2.3 Pre-Bid Meeting and Clarifications

- BSCDCL shall schedule a Pre-Bid meeting with the prospective bidders as per the timelines mentioned in the Bid Fact Sheet.
- The interested bidders need to ensure that they have submitted their queries as per the date mentioned in the Bid Fact Sheet.
- Queries provided by the Bidders should be as per the format provided in the Bidding Forms
- **Queries of only those bidders will be entertained who has purchased the RFP.**
- Response to the queries and clarification shall be uploaded by the BSCDCL on MP Tender Portal.
- At any time prior to the last date of receipt of the bids, BSCDCL may, for any reason, whether at its own initiative or in response to a clarification raised by a prospective bidder, modify the Bidding Document through a Corrigendum.
- Any such corrigendum shall become part of this RFP.
- In order to provide prospective bidder reasonable time for taking the corrigendum into account, BSCDCL may, at its discretion, extend the last date for the submission of the Bid.
- The purpose of the pre-bid meeting is to provide a forum to the bidders to clarify their doubts / seek clarification or additional information necessary for them to submit their bid. Date, Time and Venue for the Pre-Bid Meeting :
 - Pre-Bid conference will held on 15-10-2019 at 12:00 p.m.
 - Venue for Pre-Bid conference: Bhopal Smart City Development Corporation Limited, Zone 14, near Tatpar petrol pump, BHEL, Govindpura, Bhopal, Madhya Pradesh-462023
- The queries should necessarily be submitted in the following format:

Request for Clarification			
Name and Address of the Organization submitting request			
Name and Position of Person submitting request			
Contact Details of the Organization / Authorized Representative			
Tel: Mobile: Fax: Email:			
Sr.No	RFP Document Reference (Volume, Section No., Page No.)	Content of the RFP requiring clarification	Clarification Sought
1			

2.4 Sealing, Marking and Submission of Bids

Bidders are required to submit their bids in separate sealed envelopes as per instructions given below:

Part 1: Pre-Qualification Bid, Bid Fees, EMD shall be submitted online at www.mptenders.gov.in along with duly bound hardcopy and soft copy in CD/DVD/ Pen drive/ USB stick with complete details as mentioned in Section 0 in “**Envelope 1**” super scribed “**Pre-Qualification Bid**” with Tender No, Due Date and RFP Name – “**Selection of System Integrator for Information and Communication Technology (ICT) Upgradation and Enablement of Fire Services in Bhopal Smart City**”. The proposal shall also consist with all supporting documents.

Part 2: Technical Bid shall be submitted online at www.mptenders.gov.in along with duly bound hardcopy and soft copy in CD/DVD/ Pen drive/ USB stick with complete details as mentioned in Section 7.3 in “**Envelope 2**” super scribed “**Technical Bid**” with Tender No, Due Date and RFP Name – “**Selection of System Integrator for Information and Communication Technology (ICT) Upgradation and Enablement of Fire Services in Bhopal Smart City**”. The proposal shall also consist all supporting documents, RFP Copy, Addendum & Corrigendum, if any.

Part 3: Financial Bid: The Financial Bid shall be submitted online at www.mptenders.gov.in as per formats and instructions as mentioned in Section 7.4

The large envelope / outer envelope containing above envelopes must be sealed and super scribed and shall be sent as under:

Details to be mentioned exactly on sealed envelope

<p>Tender Details</p> <ul style="list-style-type: none">• RFPNo.: MPBSCDCL/TENDER NO- 104• Bid for “Selection of System Integrator for Information and Communication Technology (ICT) Upgradation and Enablement of Fire Services in Bhopal Smart City”.• Last date of Submission: Online Submission of Bid is to be done on or before <04-11-2019> at <17:30 hrs>at www.mpeproc.gov.in <p>Hardcopy submission : In sealed envelope strictly by in Person/RPAD/Postal Speed Post On or before <05-11-2019> at <12:00 hrs>p.m. addressing to “CEO, Bhopal Smart City Development Corporation Limited Zone 14, near Tatpar petrol pump, BHEL Govindpura, Bhopal, Madhya Pradesh- 462023”.</p>	<p>To,</p> <p>Chief Executive Officer (CEO)</p> <p>Bhopal Smart City Development Corporation Limited, Zone 14, near Tatpar petrol pump, BHEL Govindpura, Bhopal Madhya Pradesh- 462023</p>
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1. BSCDCL will not accept submission of a proposal in any manner other than that specified in the document. Proposals submitted in any other manner shall be treated as defective, invalid and rejected.

2. If the envelopes are not sealed and marked as instructed above, the BSCDCL assumes no responsibility for the misplacement or premature opening of the contents of the application and consequent losses, if any suffered by the Bidder.
3. Each Bidder shall submit only one proposal containing documents as below. A bidder who submits more than one proposal under this contract will be disqualified
 - a. Original copy of the Bid fee & EMD
 - b. Pre-qualification criteria related documents
 - c. Technical Proposal related documents
 - d. RFP Copy and Addendum & Corrigendum
 - e. The Bidder shall prepare original set of the Proposal (together with originals /copies of documents required to be submitted along therewith pursuant to this document) and applicant shall also provide a soft copy on a Compact Disc (CD) / Pen Drive / USB stick. In the event of any discrepancy between the original and CD/Pen Drive/USB stick, the original shall prevail
 - f. Each page of the above should bear the initials of the Applicant along with the seal of the Applicant in token of confirmation of having understood the contents. In case of consortium the bid will be signed by the Prime Bidder.
4. Pre-qualification and technical bid should be signed by an authorized person of the bidder. The pre-qualification bid should be submitted along with a certified true copy of a board resolution/power of attorney empowering authorized signatory to sign/act/execute documents binding the bidder to the terms and conditions detailed in this proposal. In case of the Consortium the Prime bidder will submit this document.
5. Bids must be direct, concise, and complete. BSCDCL will evaluate bidder's bid based on its clarity and completeness of its response to the requirements of the project as outlined in this RFP. The CEO, BSCDCL reserves the right to accept or reject any or all the bids without assigning any reason.

2.5 Submission and Opening of Bids

- The prices should NOT be indicated in the Technical Proposal. The failure to comply shall lead to rejection of bids.
- Conditional bids are liable to be rejected.
- The bids submitted by physical submission/telex/telegram/fax/email shall not be entertained.
- The MP Tender Portal shall not permit the bidder to submit the bids after the deadline for submission of bids.
- BSCDCL shall not be responsible for delay or non-receipt of the documents.
- The bidder's representative (max 2), may attend the bid opening.
- To assist in the examination, evaluation, and comparison of the bids, and qualification of the Bidders, the BSCDCL may, at its discretion, seek any clarification from bidders.
- If the Bidder does not provide clarifications of its bid by the date and time set in the BSCDCL's request for clarification, the bids shall be evaluated basis the information available with the BSCDCL.
- BSCDCL reserves the right to accept or reject any bid, and to annul the bidding process and reject all bids at any time prior to contract award, without thereby incurring any liability to Bidders

3. Section III: Qualification & Evaluation Methodology

3.1 Pre-Qualification Criteria

Following criteria's prescribed as the Pre-Qualification criteria for bidder interested in undertaking the project:

S. No.	Parameter	Eligibility criteria	Supporting documents required
1.	Legal Entity	<p>The Sole Bidder</p> <p>OR</p> <p>Prime Bidder (in case of consortium) and each consortium members</p> <p>Should be</p> <ol style="list-style-type: none"> i. A company incorporated in India under the Companies Act, 1956 and subsequent amendments thereto or Limited Liability Partnership Firm under Limited Liability Partnership Firm Act 2008 ii. Should be operational at least for last 5 years as on date of publishing of RFP. iii. Should have GST Number <p>Consortium Members</p> <ul style="list-style-type: none"> •Max 2 companies are allowed in a consortium including Prime bidder <p>In case of consortium: the consortium partner can be either a company registered under the Indian Companies Act 1956 or a Partnership Firm registered under Indian Partnership Act 1932 or a Proprietorship Firm or a Limited Liability Partnership</p>	<ol style="list-style-type: none"> i. For Sole/Prime Bidder/Consortium Member, Copy of Certificate of Incorporation/Registration and Copy of Memorandum of Associations (MOA), Articles of Association (AOA), duly signed by the authorized signatory of the bidder. ii. For Sole/Prime Bidder/Consortium Member, GST Registration Copy

S. No.	Parameter	Eligibility criteria	Supporting documents required
		<p>Firm under Limited Liability Partnership Firm Act 2008 and be operational at least for last 5 years as on date of publishing of RFP</p> <p>Note:</p> <ul style="list-style-type: none"> •The Prime bidder shall be jointly and severally responsible for complete scope, whereas consortium partner shall be severally responsible only for its respective scope. 	
2.	Financial Strength	The bidder (lead bidder, in case of consortium) should have a positive net worth and should be a profit making company for the last three financial year's i.e. 2016- 2017, 2017-2018 and 2018-2019	<p>Certificate from the Statutory auditor / CA clearly specifying the average annual turnover for the specified years (to be provided by each consortium member in case of consortium)</p> <p>Audited Balance Sheet (to be provided by each consortium member in case of consortium)</p> <p>Audited Profit & Loss Statement (to be provided by each consortium member in case of consortium)</p>
3.	Turnover	<p>The Sole Bidder / Lead Member (in case of Consortium) should have a minimum average annual turnover of Indian Rs. 7 (Seven) crores during the last three (3) financial years from systems installation, integration/software development & maintenance business, ICT projects in the last three years (Financial Years: 2016-17, 2017-18 and 2018-19).</p> <p>The Consortium partner, if any, should have a minimum average annual turnover of Indian Rs. 1(one) crores during the last three (3) Financial year's i.e. 2016-17, 2017- 2018 and 2018-2019</p>	<p>Certificate from the statutory auditor / CA certified provisional figures CA clearly specifying the annual turnover for the specified years. Notarized copy of the certificate should be submitted.</p>
4.	Experience	The bidder / any member of consortium should have experience in implementing at least one (01) integrated ICT project in last five years in India, for any Central	<p>Copy of Work Order and Work Completion Certificate (in case of completed projects) signed by a competent authority clearly stating the scope and contact details of the</p>

S. No.	Parameter	Eligibility criteria	Supporting documents required
		Government Department, State Government Department or any PSU, having value over 2 crores.	reference person. In case completion certificate is not available, self-certification of Go-Live need to be submitted.
5.	Certification	The bidder should possess a valid ISO 9001:2008 certificate or above	Copy of valid certificates
6.	Non Black Listing	The sole bidder OR the Prime bidder and each of the member of the Consortium should not be under a declaration of ineligibility for corrupt or fraudulent practices or blacklisted with any of the Government (Central or State), Semi-Govt. & PSU in India in last five years (from the date of submission of bid)	Self-Declaration Letter duly signed by authorized signatory on company letter head as per format given in section 7 of this RFP
7.	No Deviation	Statement of No Deviation from the RFP Requirements to be submitted by the Sole Bidder / Lead Member (in case of Consortium)	Letter from authorized signatory of the Bidder as per format given in Section 7 of this RFP

Notes:

- For a bidder, who is having more than 75% shareholding (stake) of foreign parent company, the turnover, net-worth and project experience (IN THE SAME DOMAIN) of parent company shall also be considered for tender evaluation purposes. For this, support letter(s) from parent company on their letterhead (Notarised copy) to be provided. If any false information is submitted, the bidder shall be subjected to disqualification and possible black-listing,
- The bidder/lead bidder must attach valid documents and undertakings in support to their Technical and Financial capabilities/strength, as mentioned above. Without proper and complete supporting documents, the Bid proposals are liable to be rejected.
- The bidder/lead bidder should submit Manufacturers Authorization Certificate (MAF) from Original Equipment Manufacturers (OEMs) specific to the bid. The bidder/lead bidder should have a back-to-back support agreement/arrangement for services including supply of spare parts etc. with the OEMs which includes the post-sales support activities for the entire project period.
- The MAF is applicable for OEMs of IT equipment's mentioned in the BoQ.
- All the proposed equipment should not be declared End-of-Support by the OEMs for next 5 years from the date of bid submission.

3.2 Technical Evaluation Criteria

- a) Technical Proposal for only those Bidders will be opened who have found to be in compliance with the Pre-Qualification Criteria.
- b) BSCDCL may invite bidders to make a presentation at a date, time and locations determined by it. The purpose of such presentations and demonstration would be to allow the Bidders to present their proposed solutions, approach, implementation plan, etc. to the BSCDCL.
- c) The committee shall check Technical eligibility of the bidder based on criteria given in table below.

Section	Evaluation Criteria	Maximum Marks										
A	Bidder Competence and Relevant Experience	30										
A1	<p>People in Organization</p> <ul style="list-style-type: none"> The bidder (all the consortium members together, in case of consortium) having at least 40 FTE (Full Time Employees) on the payroll of organization working on ICT projects will get 70% marks of total allocated marks. For every additional 20 FTEs, the bidder will get additional 10% marks subject to maximum of 5 marks. <table border="1"> <thead> <tr> <th>Number of FTE</th> <th>Marks</th> </tr> </thead> <tbody> <tr> <td>More than 40 FTE</td> <td>10</td> </tr> <tr> <td>31 to 40 FTE</td> <td>7.5</td> </tr> <tr> <td>21 to 30 FTE</td> <td>5</td> </tr> <tr> <td>20 FTE or Less</td> <td>2.5</td> </tr> </tbody> </table>	Number of FTE	Marks	More than 40 FTE	10	31 to 40 FTE	7.5	21 to 30 FTE	5	20 FTE or Less	2.5	10
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21 to 30 FTE	5											
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A2	<p>Bidder Experience – in Relevant projects</p> <p>The bidder / any member of consortium should have experience in implementing at least one integrated ICT project in last five years in India for any Fire Department of any State or Municipal Corporation. It should include one out of below mentioned installation:</p> <ol style="list-style-type: none"> Command and Control Centre for Fire Operations Computer Aided Dispatch Vehicle Tracking and Dispatching System <table border="1"> <thead> <tr> <th>Number of Projects</th> <th>Marks</th> </tr> </thead> <tbody> <tr> <td>= 4 or > 4</td> <td>10</td> </tr> <tr> <td>= 3</td> <td>7.5</td> </tr> </tbody> </table>	Number of Projects	Marks	= 4 or > 4	10	= 3	7.5	10				
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	<table border="1"> <tr> <td>= 2</td> <td>5</td> </tr> <tr> <td>= 1</td> <td>2.5</td> </tr> </table>	= 2	5	= 1	2.5															
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A3	<p>Bidder Experience – deployment of Computer aided dispatch software</p> <ul style="list-style-type: none"> The bidder/any consortium member should have experience of one completed project that entails deployment of Computer aided dispatch software in at least 50 vehicles. <table border="1"> <thead> <tr> <th>Number of Projects</th> <th>Marks</th> </tr> </thead> <tbody> <tr> <td>= 4 or > 4</td> <td>10</td> </tr> <tr> <td>= 3</td> <td>7.5</td> </tr> <tr> <td>= 2</td> <td>5</td> </tr> <tr> <td>= 1</td> <td>2.5</td> </tr> </tbody> </table> <p>Note: Documentary proof to be provided about such integrated software.</p>	Number of Projects	Marks	= 4 or > 4	10	= 3	7.5	= 2	5	= 1	2.5	10								
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B	Technical and Functional Compliance of Solution	20																		
B1	<p>Technical Compliance of Solution – Adherence to Technical Requirement</p> <ul style="list-style-type: none"> Full compliance to technical specifications provided in this Tender for mentioned elements. <table border="1"> <thead> <tr> <th>Functional Requirement Compliance Parameters</th> <th>Marks</th> </tr> </thead> <tbody> <tr> <td>Computer Aided Dispatch (CAD)</td> <td align="center">2</td> </tr> <tr> <td>Call Center Services and Infrastructure</td> <td align="center">2</td> </tr> <tr> <td>Operator Monitoring Station</td> <td align="center">2</td> </tr> <tr> <td>Water Level Sensors for Fire Tenders</td> <td align="center">2</td> </tr> <tr> <td>Fuel Level Sensors for Fire Tenders</td> <td align="center">2</td> </tr> <tr> <td>GPS Unit for Vehicles</td> <td align="center">2</td> </tr> <tr> <td>Mobile Data Terminal for Fire Tenders</td> <td align="center">2</td> </tr> <tr> <td>Mobile NVR for Fire Tenders</td> <td align="center">2</td> </tr> </tbody> </table>	Functional Requirement Compliance Parameters	Marks	Computer Aided Dispatch (CAD)	2	Call Center Services and Infrastructure	2	Operator Monitoring Station	2	Water Level Sensors for Fire Tenders	2	Fuel Level Sensors for Fire Tenders	2	GPS Unit for Vehicles	2	Mobile Data Terminal for Fire Tenders	2	Mobile NVR for Fire Tenders	2	
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C	Approach & Methodology	10								
C1	<p>Approach & Methodology and Technical Compliance</p> <ul style="list-style-type: none"> Following parameters will be evaluated: <table border="1"> <thead> <tr> <th>Parameter</th> <th>Marks</th> </tr> </thead> <tbody> <tr> <td>Completeness of project plan and ease of implementation (including training and change management plan)</td> <td>5</td> </tr> <tr> <td>Clarity of BoM, Details about unique make and model and technical compliance of hardware and software</td> <td>5</td> </tr> </tbody> </table>	Parameter	Marks	Completeness of project plan and ease of implementation (including training and change management plan)	5	Clarity of BoM, Details about unique make and model and technical compliance of hardware and software	5			
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D	Project Presentation and Demonstration/Proof of Concept	5								
D1	<ul style="list-style-type: none"> Following parameters will be evaluated during presentation: <table border="1"> <thead> <tr> <th>Parameter</th> <th>Marks</th> </tr> </thead> <tbody> <tr> <td>SI's understanding of requirements (functional and technical) and completeness of proposed solution in presentation.</td> <td>2</td> </tr> <tr> <td>Presentation of Approach & Methodology for implementation</td> <td>1</td> </tr> <tr> <td>Clarifications given during Presentation</td> <td>2</td> </tr> </tbody> </table>	Parameter	Marks	SI's understanding of requirements (functional and technical) and completeness of proposed solution in presentation.	2	Presentation of Approach & Methodology for implementation	1	Clarifications given during Presentation	2	
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D2	Demonstration/Proof of Concept/Presentation Proof of Concept (PoC) , Presentation & Demonstration of Offered Solution and all equipment's mentioned in this RFP	5								
E	Proposed Resources for the Project	5								
E1	<p>People on Project</p> <ul style="list-style-type: none"> Following profiles suggested by the bidder will be evaluated. Minimum qualifications of these resources shall be as per RFP <table border="1"> <thead> <tr> <th>Profile</th> <th>Marks</th> </tr> </thead> <tbody> <tr> <td>Project Manager – 1 Nos</td> <td>2.5</td> </tr> <tr> <td>Field Support Engineer-2 Nos</td> <td>2.5</td> </tr> </tbody> </table>	Profile	Marks	Project Manager – 1 Nos	2.5	Field Support Engineer-2 Nos	2.5			
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Note: Sub contracted Purchase Orders/Work Orders shall not be allowed except the conditions given in Section 7x

1. At the stage of technical evaluation, BSCDCL will assign points (quality of services score) to the pre-qualified bidders based on the technical evaluation criterion prescribed in this RFP. To qualify the technical evaluation stage, the bidder must score a minimum of **50 marks**.
2. Documentary evidence (Citation, Copy of completion / ongoing client certificate and work order / Contract) is required for all project experience.
3. In case project is on-going a certificate from the Chartered Accountant/Statutory Auditor/Project Authority has to be provided mentioning that 70% of the project is completed.
4. For International project if the original client certificate and other documents are in language other than English than a translated copy duly verified by Indian embassy shall be submit with bid document
5. For projects where fee has been received in any currency other than Indian Rupees, than the foreign currency conversion rate available on Reserve Bank of India's portal as on the date of publication of the tender document shall be used for conversion of amount in foreign currency to Indian Rupees equivalent.
6. BSCDCL (or a nominated party) reserves the right to check/validate the authenticity of the information provided in the Pre-qualification and Technical Evaluation criteria and the requisite support must be provided by the Bidder.

3.3 Evaluation of Financial Bids

- The financial bids for only those bidders will be opened who have qualified in the technical criteria (section 3.2).
- Financial bids, not substantially responsive or incomplete in any manner, are liable to be disqualified. The bidder with lowest bid value shall be declared as Lowest Bidder (L1).

Additional information/clarification –

BSCDCL reserves the right to ask for any additional information, as it may deem necessary to evaluate the bid proposal. Bidders that fail to submit additional information or clarification as sought by evaluation committee within 7 days of date of letter requesting for such additional information and/or clarification from BSCDCL, their bids will be evaluated based on the information furnished along with the bid proposal.

4 Section IV: Detailed Scope of Work

BSCDCL wishes to utilize the services of a System Integrator (SI) for Information and Communication Technology (ICT) Upgradation and Enablement of Fire Service in Bhopal Smart City. The project is envisaged to be implemented in a time period of 6 months which is considered as implementation period and the Operations & Maintenance Period (O&M) is considered for a period of 3 years from Go-Live.

Situational Analysis:

Presently, the Fire Prevention and Firefighting Services of the Bhopal City is being Operated and Managed by Bhopal Municipal Corporation through their Fatehgarh Firefighting Station as Headquarter and 10 firefighting substations spread across the city. Presently, entire operations of the firefighting department is managed through a temporary 24X7 operational call center of 4 operators which has been set up by the Bhopal Municipal Corporation from disaster management perspective. Apart from handling the firefighting emergency call from the call center, it also caters the needs of the emergency services like drought, flood, water requirements etc. Information related to firefighting and fireprevention requirement are shared via call center to the relevant firefighting station for the support. Information of the same is managed through an application manually to store the details of the incident



taken place.

The fleet of the Fire Prevention and Firefighting Services consist of following vehicles:

1. Firefighting Vehicles – 27 Nos
2. Water Tankers – 4 Nos
3. Hydraulic Crane – 1 Nos (Another 1 Nos is under process of procurement)
4. Ambulance- 10 Nos

5. Rescue Van – 1 Nos
6. Jeep – 1 Nos
7. Bikes – 16 Nos

Movement of some of the vehicles is monitored via GPS devices installed in the Fire Tenders through a Vehicle Tracking & Monitoring System (VTMC) used by Bhopal Municipal Corporation. The bidder is required to integrate the application with the existing VTMC application.

The Scope of Work envisaged for the System Integrator (SI) is categorized as under:

- Central Fire Control Station (CFCS) at Fatehgarh Station
 - Video Wall Cubes- 2 Nos
 - Operating Work stations – 3 Nos and 1 Printer (B/W Print)
 - Central Call Center- 1 PRI Line, 3 IP Phones
 - Communication Switches for Data Center Communication
 - Public Address System – 1 Nos and Surveillance and Security Infrastructure for the Stations
 - Civil Infrastructure, Interiors and Fabrication (15 X 20 Sq. ft.)
 - Furniture – 4 Nos at least and Passive Infrastructure
 - Network Connectivity and Bandwidth

- Fire Control Station at 10 Other Stations
 - Operating System – 10 Nos, 1 for each station and 1 Printer (B/W Print)
 - Call Center – 10 IP Phones, 1 for each station centrally connected with CFCS and ICCS.
 - Public Address System – 1 Nos and Surveillance and Security Infrastructure for the Stations
 - Communication Switches for Data Center Communication
 - Civil Infrastructure, Interiors and Fabrication
 - Furniture-1 Nos for each station and Passive Infrastructure
 - Network Connectivity and Bandwidth

- Vehicle Fleet Upgradation
 - Fuel Sensor – 31 Nos (27 Fire Fighting Vehicle and 4 Water Tankers)
 - Water and Hydrant Sensors- 31 Nos (27 Fire Fighting Vehicle and 4 Water Tankers)
 - Drivers Console (Radio control, Touch Screen, GPS Tracking, GSM Connectivity with CFCS)- 43 Nos(27 Fire Fighting Vehicle, 4 Water Tankers, 10 Ambulances, 1 Hydraulic, 1 Rescue Van)
 - Remote Surveillance Device and associate Infrastructure – 43 Nos (27 Fire Fighting Vehicle, 4 Water Tankers, 10 Ambulances, 1 Hydraulic, 1 Rescue Van)
 - GSM and GPRS based Network Connectivity and Bandwidth

- Data Centre and Application Hosting
 - The IA would be required to host the Fire Application on Cloud.

- Integration
 - Integration with GIS Application
 - Integration with One City One App
 - Integration with Integrated Command & Control Center
 - Integration with CM Helpline
 - Integration with BMC Call Center

- Integration with Dial 101 helpline
- Application
 - Call Center Application
 - Call Centre Fire Management Application Cost including Computer Aided Call takers and Dispatch Software ,Video Management System, Vehicle Tracking System
 - Training of the operators and authority representatives
- Maintenance
 - Comprehensive maintenance for 3 Years

Pre Implementation scope till Go-Live

1. Supply, Installation, Commissioning of Central and Local Monitoring Equipment, Communication and Navigation Devices, Sensors and other equipment.
2. Supply, Installation, Commissioning, Configuration/Customization of software (Integrated Application Platform) together with necessary databases and other software.
3. Integration of software with external applications like Integration with GIS, EMS, ERP, Helpdesk, Call Management and AVLS of ITMS etc.
4. Submission of Inception report, System Requirement Specifications, System Design documents and Site Survey Report in which the System Integrator has to arrive at the end point infrastructure requirements.
5. Development and Deployment of Application and Others at Cloud.
6. Procurement of Hardware, Licenses and hosting the solution.
7. User Acceptance Testing and pre-launch security audit, fire standards audit of the Services.
8. Change Management Control and Roll - Out of the solution
9. Incidental public works required in order to deploy the system components
10. Compliance with National and International standards for Software used
11. Preparation of Standard Operating Procedures (SOPs) with help of the relevant departments like Fire Services. The departments like Ambulance Emergency Services etc. may be added during project duration.
12. Provisioning of IP based internet connectivity for information/data sharing within all the ICCCs, CFCSs, and FCSs.
13. Utilizing existing ICCC infrastructure for storage and application hosting.

Post Implementation Scope for the Maintenance Period

1. 24x7 Manpower Support for application maintenance including preventive, corrective maintenance and monitoring of the application.
2. System handholding at locations.
3. Recurring refresher trainings and Change Management activities.
4. Regular security, third party fire audit and inspection for the solution as per applicable standards for the state and country.
5. All infrastructure (e.g. sensors, panels, etc.) upgrade, maintenance and cost-free replacement (in case of failure) during the contract period.

4.1 Geographical Scope

It includes central monitoring of Command & Control (CFCSs) and Fire Control Station's (FCS's) at Fire Stations across the city. It also includes installation of CCTV cameras, Vehicle Sensors and other field equipment's in the vehicle fleet for operations as mentioned in BOQ.

Following are the components that the System Integrator (SI) would have to Supply, install, commission and integrate as the part of scope of this tender.

- Hardware Infrastructure for Central Fire Control Station (CFCS) like Video Wall Cubes, Operating Systems, IP Phone, Computer Systems, etc. for Fatehgarh Station
- Hardware Infrastructure for 10 Nos Control Centres like IP Phone, Computer Systems, surveillance system and Public Address System
- To provide an overview of the entire city limits under Bhopal city, incident tracking, time stamp based event logging and recording of various events.
- Application should have features like
 - GIS integration with Base maps from BMC/BSCDCL that can have custom Boundaries to be defined as per the area being monitored by local fire station
 - It should capture Source and type of incident that helps the fire department pinpoint actual location of event
 - It would be installed at all local fire stations
- Water level and fuel levelsensors for Fire Tenders which can track water levels of fire tenders with an alarming mechanism for tracking.
- Mobile Data Terminal for Fire Tendersfor Data Communication with Fire Tenders
- GPS units for Fire tender, water tankers and ambulances to be integrated with central monitoring station at CFCS
- Mobile Network Video Recorder (NVR) for fire tenders to be installed in fire tenders and to be integrated with central monitoring station at FatehpurCFCS
- 3G/4G Router in fire tender to be installed in fire tenders for providing connectivity to wireless field equipment's installed in fire tender
- Fix dome cameras for fire tender : To install Fixed dome camera and in Fire Tender to get the live feed of the incident to the monitoring station
- Any Other components Quoted by bidder, If bidder is quoting any other equipment additional to the BoQ provided for this Bid.

4.2 Supply, Installation, Configuration/ Customization of Integrated Application Platform

The System Integrator (SI) will be responsible for the supply, installation, configuration, customization of application (COTS/Bespoke development) together with necessary databases and other software. The scope of work will include the following:

1. System Integrator (SI) shall be responsible for understanding the functional requirements of the solution as mentioned in the RFP. The SI will be responsible for requirement gathering, detailed analysis, mapping the requirements with suitable software and identification of configuration and customization area. The bidder shall propose suitable solution to meet the functional and technical specifications laid down in the bid document.
2. Supply the genuine, full use and perpetual licenses, if COTS solution is proposed for any/all of the subsystem or application. This would exclude any enterprise level license already available with BSCDCL for use. The bidder is required to pro-actively seek information on

- licenses available with BSCDCL and confirm whether they can be used for the purpose of this project.
3. Install, configure and/or customize the proposed Solution as per the functional and technical requirements provided by BSCDCL in the bid document.
 4. Developing the specific modules and functionalities which are not available in the proposed COTS solution but are required in the application as per the requirements provided by BSCDCL in the bid document.
 5. Supplying the application, database and related software, integration tools and documenting the process to be followed for installing the same.

4.3 Integration Requirements

The solution is envisaged to be a completely automated and integrated software application to be used by internal users of BSCDCL. Automation will only be achieved if the system is capable enough to exchange data / information to and from other external systems or departmental applications. The System Integrator shall ensure that a standard mechanism of data exchange be built and implemented to cater to any external systems requirement so that the impact on the solution is minimal due to any external changes.

The system shall enable integration / data exchange to and from any external application / database which will happen only through an 'Interface Component' by using a standard data exchange protocol through a secure channel, utilizing the 'Interface component'. The primary responsibility of the integration will lie with the SI. The SI will be responsible to liaise with the external agencies for successful integration. BSCDCL will facilitate the process of to facilitate issue resolution. The integration will be required with the following BSCDCL applications being used or developed by BMC/BSCDCL. –

Inbound and Outbound Integration (as per the requirement) with following running application is expected:

1. ICCA Application
2. Bhopal Plus Application
3. CM Helpline
4. GIS Application
5. BMC Call Center and Other Call Center

Also, apart from the hardware & software that will be used at the Central Fire Control Station and data center, there will be set of hardware devices that will be supplied and installed by the selected bidder in the vehicles as well as at department locations. The list of the same is as below. The list below is indicative and will have to be confirmed by the bidder with the department at the time of actual supply and installations.

Considerations for devices installation:

1. The inside vehicle GPS device should be tamper proof. Also it shall be installed in the dashboard of the vehicle. The GPS device shall also generate notifications in case of any tampering activity.
2. The others sensors shall also be able to generate tampering notifications.
3. The GPS device should not use the inside vehicle battery to an extent that it drains out the vehicle battery. It should have a facility to go in a standby mode. The bidder should arrange

- added battery in case of the GPS device and sensors are using more battery from the vehicle. The bidder should also arrange for charging and maintenance of the added battery.
4. The System Integrator will responsible for installing and maintaining & operating all the required in vehicle units for execution of AVLS which includes GPS device, Data connection card (GSM,CDMA,4G,3G,2G Card), sensors. The payments and responsibility of smooth operations of the above mentioned in vehicle units will of the System Integrator.

4.4 Deliverables

In order to achieve the high level of stability and robustness of the application, the system development life cycle must be carried out using industry standards best practices and adopting the security constraints for access and control rights. The System Integrator is expected to follow the standard SDLC cycle, including proper assessment, documentation, version control and other criteria's to ensure long term continuity of this project. The major deliverables to be submitted by the SI are as follows:

1. Inception Report which includes Project Schedule, Manpower Deployment List, Resource Deployment List, Communication Plan, Progress Monitoring Plan, Standard Operating Procedures, Risk Mitigation Plan, Escalation Matrix
2. Site Survey Report which includes detailed bill of material indicating: number, type and make of sensors and output devices to be deployed at each location
3. Software Development Lifecycle Documents which include Traceability Matrix, Functional Requirements Specification, System Requirements Specification, High Level design, Detailed design, Database design, Application Architecture, User Acceptance Test plan, System Test plan, User manual and Training manual
4. The System Integrator shall ensure the deployment of management and monitoring tools like Project Management, Application Performance Monitoring, Enterprise Management System, version control (software as well as document) and bugs tracking tool. At least two user licenses of the same must be provided to BSCDCL during the tenure of contract.

4.5 Application Hosting at Cloud

The IA would be required to host the Fire Application on a Cloud environment using any Cloud Service Provider. The IA has to setup a local server at CFCS (Central Fire Control Station) with synchronization, data security and automatic data backup on cloud data center to provide state-of-art features for efficient fire management operations. The Bidder needs to provide connectivity at the fire station, for synchronizing the data from the local server at CFCS with the Cloud. Hosting video feeds on cloud would require very heavy bandwidth and storage requirement, which becomes very expensive. Hence it is recommended to store such feeds locally at CFCS. The Complete Application should have the capability to be integrated to the ICCC using API's.

Cost of cloud hosting and data storage to be included in the financial bid of the bidder. The Bidder should ensure adherence to MeitY guidelines for data hosting, IT guidelines compliance for DC within India.

However, bidder is free to recommend solution in order to optimize the storage, application and data centre infrastructure requirements based on the feasibility of the solution and BSCDCL at its own discretion can agree to the same, if required in the interest of the project.

Security Controls for Cloud Services

The security controls for creating and managing cloud services shall comply with the following guidelines.

Empanelment of Cloud Service Offerings CSPs facilities/services shall be compliant with regulative directives and industry best practices. The SLA shall be based on the guidelines issued by Government Departments on contractual terms related to Cloud Services (MeitY guideline dated 31/03/17). The security controls should include the following:

- a) The CSP should be empanelled by MeitY for providing cloud services. The CSPs facilities/services shall be certified to be compliant to the following standards: ISO 27001, ISO 27017, ISO 27018, ISO 20000-9, ISO/IEC 20000-1 & PCI DSS.
- b) The CSP/Service Provider shall comply or meet any security requirements applicable to CSPs/Service Providers published (or to be published) by MeitY or any standards body setup / recognized by Government of India from time to time and notified to the CSP/Service Providers by MeitY as a mandatory standard.
- c) The CSP/Service Provider shall meet all the security requirements indicated in the IT Act 2000, the terms and conditions of the Provisional Empanelment of the Cloud Service Providers and shall comply with the audit criteria defined by STQC.
- d) Incident Management shall be managed by CSP / third party.
- e) Periodic secure code review shall be performed for cloud applications.
- f) Data encryption at rest / transit depending on sensitivity of data shall be implemented using departments managed keys, which are not stored on the cloud.
- g) The CSP shall undertake to treat information passed on to them as classified. Such Information shall not be communicated / published / advertised by the CSP to any person/organization without the express permission of the Department.
- h) CSP shall inform all security breach incidents to Agency on real time.
- i) CSP shall ensure data confidentiality and mention Sub-contractual risk shall be covered by CSP.
- j) E-Discovery shall be included as clause in SLA with CSP. It is the process of locating, preserving, collecting, processing, reviewing, and producing Electronically Stored Information (ESI) in the context of or criminal cases/proceedings or investigation. Logging and reporting (e.g., audit trails of all access and the ability to report on key requirements/indicators) must be ensured.
- k) The Law Enforcement Agency as mandated under any law for the time being in force may seek access to information stored on cloud as provided by the Service Provider. The onus shall be on the CSP to perform all due diligence before releasing any such information to any such law enforcement agency.
- l) CSP must ensure location of all data related to application resides in India only.
- m) The Cloud Service Provider's services offerings shall comply with the audit requirements defined under the terms and conditions of the Provisional Empanelment of the Cloud Service Providers (or STQC /MEITY guidelines. The Audit, Access and Reporting Requirements should be as per the terms and conditions of the Provisional Empanelment of the Cloud Service.
- n) CSP's exit Management Plan shall include - Transition of Managed Services & Migration from the incumbent cloud service provider's environment to the new environment and shall follow all security clauses for smooth transition.
- o) SLA with CSP shall cover performance management & dispute resolution escalation. Guidelines on Service Level Agreement issued by MeitY lists out the critical SLAs for cloud services.

- p) Identification and problem resolution (e.g., helpline, call centre, or ticketing system) mechanism must be defined.
- q) Change-management process (e.g., changes such as updates or new services) must be defined.
- r) Appropriate segregation of Virtual Private Cloud (VPC) security rules defined as part of firewall to restrict access, Role based access management, Logging and monitoring shall be ensured.
- s) VPN gateway must be setup to ensure controlled access, appropriate security rules must be employed to encrypt outward data flow, IDS, IPS, API Gateways to be setup and ELB logs to be maintained for any activities and access and exceptions to carried out in the cloud setup, Database logs to be routed as part of the Logging VPC setup.
- t) Digital Certificate shall be implemented for secure access.
- u) Web Application Firewall must be provided, Host IPS must be setup on all the Web servers, Web servers must be configured as per the CIS hardening guidelines and baseline security requirements, logging and monitoring should be enabled.
- v) Application access between hosted applications shall be segregated, internal infrastructure and external traffic, Role based access must be defined, hardening of database instances as per the CIS baselines configuration guidelines in the cloud setup must be ensured, Logging and monitoring must be enabled.
- w) For SLAs to be used to steer the behaviour of a cloud services provider, imposition of financial penalties is to be incorporated.
- x) Monitor Vendor Service level agreement for annual end-to-end service availability of 99.999 percent. The end to end service agreement should be in place for minimum period of six years from the date of operations of the systems.

Data Centre / Data Recovery Centre

This will be Cloud based Data Center and Data Recovery Centre (with 50% capacity of the Application)

IA to ensure that standard protocols will be followed by CSP as per the Industry Standards and MeitY guidelines for the following:

- Compute
- Networking
- Storage – Block Storage
- Storage – Object Storage
- Storage – File Storage
- Relational Database
- Non-Relational Database
- Security and administration
- Deployment and Management
- Application Services
- Hybrid Integration

4.6 Testing & Quality Adherence

The System Integrator shall ensure that the application is thoroughly tested as per standard process defined hereunder or by BSCDCL should the process evolve over the contract period. BSCDCL requires thorough and well-managed test methodology to be conducted. The System Integrator must build up an overall plan for testing and acceptance of system, in which specific methods and steps should be clearly indicated and approved by BSCDCL. The System Integrator is required to incorporate all suggestions / feedback provided after the elaborate testing of the application, within a pre-defined, mutually agreed timeline.

The System Integrator needs to keep track of the suggestions that deviate from the original requirements before classifying them as change request / enhancement. This classification shall be done in separate meetings where all stakeholders will agree on the level of change and the revised timeline to implement it. All fixes done to comply with the already specified requirements are required to be done as per the specified timelines only at no extra cost to BSCDCL.

The System Integrator shall undertake the following activities:

1. Outline the methodology that will be used for testing the system
2. Define the various levels or types of testing that will be performed for system
3. Provide necessary checklist/documentation that will be required for testing the system
4. Describe any techniques, test cases/ scenarios / scripts that will be used for testing the system
5. Describe how the testing methodology will conform to requirements of each of the functionalities
6. Indicate/demonstrate to BSCDCL that all applications installed in the system have been tested
7. The vendor shall provide a workflow for sign-off on test deliverables that is mutually agreed upon by both the parties

Competent Authority from BSCDCL shall issue appropriate acceptance certificate to the System Integrator for successful roll-out of the application. The testing levels should include Unit Testing, Integration Testing, System Testing and Acceptance Testing. These tests should be included such as security testing, performance testing, Usability testing, Concurrency testing, etc. The System Integrator must work with BSCDCL to provide a detailed deployment plan, including but not limited to, application version control, and load all application materials, assignment of user rights and security, and verification of correct functionality. The System Integrator must present a deployment plan to BSCDCL for their approval by the beginning of the test period. It is necessary that the application is deployed as per the Implementation Schedule along with the necessary itemization of all hardware and/or software, integrating all external application as well as any and all ancillary requirements. For testing purposes, if any equipment / external device interfacing with the application is required to be setup / configured / commissioned / installed it would be the responsibility of the vendor.

The System Integrator shall ensure that the Application Solution is web enabled. The solution must use standard relational database.

Language Support: Application Portal with the function specification and registration landing page (or labels only) must be provided with bilingual i.e. in English and Hindi language.

Access and Interface: The application must be user-friendly, intuitive and equipped with help / support facilities.

The below mentioned components need to be taken care of while deploying the technology components on Solution:

1. Platform Flexibility
 - a. Multi-tier architecture shall be used
 - b. Open Standards and Interoperability shall be considered
 - c. XML / XBRL based standard shall be used wherever applicable
 - d. Compliance to SOA and Web-services
2. Interoperability
 - a. Usage of standard APIs
 - b. Service-oriented architecture (SOA) based
 - c. Support for multiple industry standard databases with ODBC, JDBC and Unicode compliance

Area	Standard
Information access/ transfer protocols	SOAP, HTTP/HTTPS
Interoperability	Web Services, Open standards
Information Security	System to be ISO27001 compliant
IT Infrastructure management	ITIL / EITM specifications
Service Management	ISO 20000 specifications
Internet Protocol	IPv6 and IPv4 ready equipment

4.7 Training

System Integrator shall provide training to the application users to efficiently use the system. Training manual shall be submitted by the System Integrator. The System Integrator shall provide training to the stakeholders and may be grouped module wise for hands-on training in batches per day for a specified duration / working days. It is proposed that training be covered over a period of one day each batch having strength of 20 participants. The training is expected to be hands-on and conducted at the training centers proposed by BSCDCL at any locations notified later. It shall be the responsibility of SI to set-up training centers with associated hardware and networking infrastructure, if required for successful conduction of the trainings. The System Integrator shall submit a softcopy (CD) and hardcopy of the training material (in English and Hindi) to the Change Management Team before commencing the training session.

In case of modifications either in the Training Plans or substitutions of the regular trainers, proper correspondence with the Change Management Team shall be made. Training program shall be continuously monitored by the representatives of BSCDCL so as to ensure desired quality standards. System Integrator shall also prepare a feedback mechanism (i.e., printed feedback forms) and get it filled by the participating batch and submit the same on a regular basis to BSCDCL.

The System Integrator shall provide audio-video content based multimedia software as training material. The System Integrator shall install and train the application users using the same. It is the responsibility of the System Integrator to prepare documents including User manuals, technical manuals, installation manual, administration manuals, training manuals and provide the same to the Change Management team. The Change Management team shall provide the necessary inputs for preparing the training material.

Tests for assessing the trainees after training shall be designed by the System Integrator and approved by the BSCDCL. Rating of the trainers shall be finalized by the BSCDCL or its nominee. On the basis of the training assessment and feedback provided by the participants, the decision on final rating of the trainers shall be taken at the sole discretion of BSCDCL. Participants who do not pass have to be retrained once by the SI at no additional cost.

Audio Visual Training system and Online Help.

1. In order to assist the users in operating / navigating through the application and processes, it is proposed that modules / section wise training material, in the form of Audio-Visual may be uploaded in each module / sub-module / section of the application which can be played at any given point of time through the browser.
2. A browser based / mobile based virtual simulated gamified environment will be created by the vendor so that fire awareness can be created across BSCDCL user base.
3. Also information in the form of a downloadable PDF format shall be provided to the Users who may refer / download it for their own personal reference as and when needed.
4. It is required that the downloadable training content should have proper indexing and internal references, mapped with key words, in order to allow any User to search and reach the desired content with the help of those key words.
5. It envisaged that any User will be able to search and read the directions / information for only the part required by him/her rather than looking through the entire PDF document and manually searching for the right content.

4.8 Manpower Support for Change Requests

The System Integrator will have to support the system for a period of 3 years after the go-live or operational acceptance. In case any changes are to be made to the system in the interim, the System Integrator will have to handle the same with a change request process. In the event of any proposed change to the agreement, scope of work and SLAs, the System Integrator shall follow change request process as determined by BSCDCL. The change shall include, but may not be limited to, changes in the scope of services as mentioned under various categories from time to time. The System Integrator must provide a change management system for monitoring change requests implementation, bug tracking and production support services.

Change Request can be raised by any BSCDCL application user / stakeholder who will be responsible for obtaining approval for the change. The System Integrator and BSCDCL shall consider the change in the context of the following parameter, namely whether the change is beyond the scope of Services and is suggested and applicable only after the testing, commissioning and certification of the Pilot Phase and the Project Go Live. The payment for the changes brought in after project certification and 'Phase Go Live' date will be calculated on the basis of man-month rate / device rates quoted by the System Integrator in its bid and estimated man-month effort/ number of deployed devices which is to be submitted by the System Integrator prior to taking up the change of control event and accepted by BSCDCL. Change requests will be reported monthly/fortnightly to BSCDCL or its nominated agencies, which will prioritize and review progress.

4.9 Handholding Support

During the Operations & Maintenance period manpower is required for supporting the project. The supporting engineer shall be responsible for:

1. Application maintenance and support services
2. Field level IT handholding services

The System Integrator shall ensure that functional support staff should be deployed for providing the IT handholding and manages the support services, as and when needed. The suggested profiles of the resources in the application maintenance and support team are given below:

Resource Profile	Role and Activities	Minimum Qualification
Project Manager	Single point of contact for all project related issues during the contract tenure and responsible for completion of project, developing the project plan	Graduate in Engineering or post-graduation in Management with minimum 8 years of IT experience, including minimum 4 years of experience of Project Management of large IT Systems Any Additional certification would be preferred.
Field Support Engineer	Monitoring and support to BSCDCLs fire staff in case of an incident. Resolving any software/ application/ panel related issues for the users at field level. They will also be responsible for handholding and supporting BSCDCL staff for the smooth roll out. They will also be responsible for escalating the calls to the central application maintenance team. Any operational related hurdles also need to be highlighted to the quality circle and the project managers.	Graduate with minimum 2 years of support experience in fire detection application systems, basic fire standards and protocols. Also should be conversant with navigation and communication systems and devices.

During the course of the contract, if it becomes necessary to replace any of the Key Personnel, the System Integrator shall with due approval from BSCDCL, provide as a replacement, a person of equivalent or better qualifications and experience than the resource being replaced / or proposed in the bid. Failure to replace personnel with the required qualifications shall result in a penalty as per the SLA defined in the contract.

The System Integrator shall provide an incident tracking system via a web interface available in real-time which will issue a trouble ticket once a complaint is booked successfully. The solution provider shall ensure that if any tickets pertain to action from their end, these calls are fully responded by the professional team. The updated status of each ticket should be made available on a web based incident

management system for tracking. This system shall generate a monthly/quarterly/half yearly/yearly reports. Such reports shall be available for download in MS-Word, MS-Excel and PDF formats.

4.10 Preventive Maintenance & Monitoring of Application

The System Integrator will have to ensure 24x7 monitoring, operation and maintenance services of the application during the contract period. O & M of the Infrastructure will include:

1. IT Infrastructure Operations and Maintenance (including but not limited to Hardware, System Software, Application Software and other Infrastructure) for a period of 3 years from Go-Live.
2. Customize and implement a proper SLA monitoring tool in consultation with BSCDCL Authorities during O&M Phase
3. Provisioning of Application Software, Hardware, and Networking etc. for integration of any intervention with application during Operation and Maintenance Phase.

The bidder will have to perform monitoring of the following devices/ systems.

1. Network
2. Sensors
3. All field devices
4. Monitoring Stations (Fatehgarh and 10 Sub Stations)

As part of Post-Implementation services, the System Integrator shall undertake Annual Technical Support for 3 years. The application maintenance and monitoring during the O & M period includes

1. Compliance to the Functional and Technical Requirements
2. Compliance to SLA
3. Application Software Maintenance, Problem identification and Resolution
4. Software Change and Version Control as per industry standards
5. Replacement of any faulty sensors, panels and output devices

The average application response time(s), application availability and other performance parameters are given in the SLAs. The application software should be designed to cater to the required load without any degradation of performance as explained above. The database schema and design should be capable of handling current and future loads without any degradation of performance.

1. System should be upwardly scalable in the event of increased usage of the system or new business requirements.
2. The System Integrator shall provide comprehensive report every month on the performance of the application and infrastructure
3. BSCDCL may initiate, with prior notice, the audit of such measurements to their satisfaction.

At the end of each quarter during O & M phase, bidder will provide a report containing the following:

1. Updated system design documents, specifications, etc.
2. Latest source code, application deployment files, configuration files for entire solution

3. Update user manuals, administration manuals, training manuals etc.
4. Updated Bill of Material and locations where sensors, output devices, and panels are installed
5. Maintenance registers for all equipment including any required version/software, patch management / device replacement etc. will be the responsibility of the solution provider for the entire contract period at no extra cost to BSCDCL.

4.11 Civil Works

1. Major Civil works are excluded from the scope however necessary excavations if required, making, closing of cut outs in the wall, necessary supports and grouting, drilling etc. are included in the scope.
2. The bidder can do a preliminary survey and quote for the same in the bid.
3. All Civil works like chasing & making good the chases making pockets for grouting if necessary, grouting of panels etc. is included in scope.
4. Fabrication and fixing of supports, frames etc. are included in the scope.
5. Furniture required to set up the Fire Control station (FCS) and Central Fire Control Station (CFCS) are included in the scope.

4.12 Inspection, Testing and Maintenance of Devices

1. The System Integrator shall be required to conduct inspection, testing and maintenance of all the devices and submit reports to BSCDL for all activities carried out along with their observations on a periodic basis during the entire contract period. These include –
 - a. Initial Installation Inspection Tests
 - b. Periodic Checks and Tests
 - i. Daily Check
 - ii. Weekly Check
 - iii. Quarterly Inspection and Test
 - iv. Annual Inspection Tests
 - v. Tests following an alarm or fire
 - c. Servicing and Maintenance
 - i. Cleaning
 - ii. Replacement and Spares

4.13 Compliance with National and International Standards

4.13.1 National Fire Standards

The bidder shall be responsible for ensuring compliance of the application with all national fire standards applicable for this project. A compliance certificate shall have to be issued from a

licensed/authorized agency for all post-installation and thereafter commissioning of the system. These include –

1. IS 15908:2011 (Fire Control & Indicating Equipment)
2. National Building Code & Life Safety (Part 4)

Note - All fees and expenses pertaining to the licensed agency are to be borne by the bidder.

4.13.2 Wireless Communication Standards

The bidder shall be responsible for ensuring compliance of all field devices (Sensors, panels, etc.) with all national wireless standards applicable to this project as prescribed by the regulatory or governing authority of India. This includes –

1. Operating frequency of wireless equipment's installed.
2. Seamless communication required between (To &From) Integrated Command & Control Center at BSCDCL, Central Fire Control Station at Fatehgarh Station and Fire Control Stations at 10 Sub Fire Sub Stations (wherever applicable).

The bidder should have all the requisite licenses from the concerned authorities in order to operate these equipment's for this project. In case, any license costs are required the same shall be borne by the bidder.

4.14 Creation of new Standard Operating Procedures (SOPs) or modification of existing SOPs

SOPs to be created as a consequence of this system, the bidder shall be required to solicit input from authorized personnel and document SOPs as per their requirements.

There might also be instances where Fire and Emergency Department might require to update their existing SOPs defined to accommodate changes introduced by the new system. The bidder shall be required to pro-actively identify all such SOPs that require update and submit the revised version after soliciting inputs from the authorized personnel.

4.15 Equipment & Material

1. All equipment and components shall be new, and the manufacturer's current model.
2. All equipment and components shall be installed in strict compliance with manufacturers' recommendations. The manufacturer's installation manuals shall be used for all wiring diagrams, schematics, physical equipment sizes, etc., before beginning system installation.
3. All Equipment shall be attached to walls and/or ceiling/floor assemblies and shall be held firmly in place (e.g., detectors shall not be supported solely by suspended ceilings). Fasteners and supports shall be adequate to support the required load.
4. Equipment shall be manufactured by an ISO 9001 Certified Company.

4.16 Wires

1. Wiring shall be in accordance with Local, state and national codes applicable and as recommended by the manufacturer of the fire alarm system. Number and size of conductors shall be as recommended by the fire alarm system manufacturer.
2. Wire and cable not installed in conduit shall have a fire resistance rating suitable for the installation.
3. All field wiring shall be completely supervised.
4. Terminal Boxes, Junction Boxes and Cabinets - All boxes and cabinets shall be listed by a National Recognized Testing Laboratory for their use and purpose.

4.17 Network Interface

1. The solution shall have an interfacing point to other local/remote devices. This shall allow for the use of remote virtual panel software, and for PC connection to upload/download field configuration programming of the system.
2. It shall be possible to interrogate the peer-to-peer network of wiring from any graphical display connected to the network. Interrogation shall include network ground voltage monitoring, data packets received, bad packets, number of communication failures at each individual network node. This interrogation feature shall be historical from the date of installation, with technician reset capabilities while troubleshooting issues. Networks that do not provide a means for technicians to interrogate network wiring and problems shall not be considered acceptable.

4.18 Responsibility Matrix

#	Key Activities	System Integrator	BSCDCL	Other Integrating Agencies	Project Management Consultant	Department of Fire and Safety, Health, Water in BMC
*C = Consultation , *I = Implementation ,* R/A =Responsibility and Accountability						
1	Project Kick Off	R/A	C	I	C	I
2	Deployment of Manpower	R/A	C	I	C	I
3	Assess the Requirement of IT Infrastructure and Non IT Infrastructure	R/A	C	C	C	C
4	Assessment of Processes	R/A	C	I	C	I

RFP – Selection of System Integrator for Information and Communication Technology (ICT) Upgradation and Enablement of Fire Services in Bhopal Smart City

#	Key Activities	System Integrator	BSCDCL	Other Integrating Agencies	Project Management Consultant	Department of Fire and Safety, Health, Water in BMC
5	Assessment Software Requirements	R/A	C	I	C	I
6	Assess Integration Requirements	R/A	C	I	C	C
7	Assess the Connectivity Requirement of all Fire Stations and Command Center and ICCC	R/A	C	I	C	I
8	Assessment Network Laying Requirement	R/A	C	I	C	I
9	Assessment Training Requirement	R/A	C	I	C	I
10	Customization of Solution Architecture	R/A	C	I	C	I
11	Creation of Detailed Drawing	R/A	C	I	C	I
12	Development of Test Cases (Unit, System Integration and User Acceptance)	R/A	C	I	C	I
13	Preparation of Final Bill of Quantity and Material	R/A	C	I	C	I
14	SoP Preparation	R/A	C	C	C	I
15	Helpdesk Setup	R/A	C	I	C	I
16	Procurement of Equipment, Sensors, Software Licenses etc.	R/A	C	I	C	I

RFP – Selection of System Integrator for Information and Communication Technology (ICT) Upgradation and Enablement of Fire Services in Bhopal Smart City

#	Key Activities	System Integrator	BSCDCL	Other Integrating Agencies	Project Management Consultant	Department of Fire and Safety, Health, Water in BMC
17	IT and Non-IT Infrastructure Installation	R/A	C	I	C	I
18	Development, Testing and Production Environment Setup	R/A	C	I	C	I
19	Software Application Customization (if any)	R/A	C	I	C	I
20	Development of Bespoke Solution (if any)	R/A	C	I	C	I
21	Integration with Third Party Services/Application	R/A	C	I	C	I
22	Unit and User Acceptance Testing	R/A	C	I	C	I
23	Implementation of Solutions	R/A	C	I	C	I
24	Preparation of User Manuals, Training Curriculum and Training Materials	R/A	C	I	C	I
25	Role-based Training(s) on use of Software	R/A	C	I	C	I
26	SoP Implementation	R/A	C	C	C	I
27	Integration of software to be used with existing software's	R/A	C	C	C	I
28	Integration with GIS	R/A	C	C	C	I

RFP – Selection of System Integrator for Information and Communication Technology (ICT) Upgradation and Enablement of Fire Services in Bhopal Smart City

#	Key Activities	System Integrator	BSCDCL	Other Integrating Agencies	Project Management Consultant	Department of Fire and Safety, Health, Water in BMC
29	Go Live	R/A	C	I	C	I
30	Operation and Maintenance of IT, Non IT Infrastructure and Applications	R/A	C	I	C	I
31	SLA and Performance Monitoring	R/A	C	I	C	I
32	Logging, Tracking and Resolution of Issues	R/A	C	I	C	I
33	Application Enhancement	R/A	C	I	C	I
34	Patch & Version Updates	R/A	C	I	C	I
35	Helpdesk Services	R/A	C	I	C	I
R= Responsibility; A=Accountability; C= Consultation; I= Information						

5 Service Level Agreements

The selected bidder would have to adhere the following or better Service Level Benchmarks during the project duration

1. The purpose of this Service Level Requirements/Agreement (hereinafter referred to as SLR/SLA) is to clearly define the levels of service which shall be provided by the System Integrator to the Authority for the duration of this contract period of the Project.
2. Timelines specified in the above section (Work Completion Timelines and Payment Terms) shall form the Service Levels for delivery of Services specified there-in.
3. All the payments to the System Integrator are linked to the compliance with the SLA metrics specified in this document.
4. The project Service Level Agreement are proposed to be performance based. For purposes of Service Level Agreement, the definitions and terms as specified along with the following terms shall have the meanings set forth below:
 - a. “Uptime” shall mean the time period for which the specified services / components with specified technical and service standards are available for LMS. Uptime, in percentage, of any component (Non IT and IT) can be calculated as:
 - b.
$$\text{Uptime} = \{1 - [(\text{System Downtime}) / (\text{Total Time} - \text{Planned Maintenance Time})]\} * 100$$
 - c. “Downtime” shall mean the time period for which the specified services / components with specified technical and service standards are not available for Users, the scheduled outages / Planned Maintenance time planned in advance for core application, related infrastructure and link failures. This includes Servers, Routers, Firewall, Switches, all servers and any other IT and non-IT infrastructure, their subcomponents etc. at all Project locations etc. The planned maintenance time / scheduled downtime will include activities like software upgrades, patch management, security software installations etc.
 - d. The selected IA/SI will be required to schedule ‘planned maintenance time’ with prior approval of BSCDCL. This will be planned outside working time. In exceptional circumstances, BSCDCL may allow the IA to plan scheduled downtime in the working hours.
 - e. “Incident” refers to any event / abnormalities in the functioning of the ILMS application, Infrastructure and services that may lead to disruption in normal operations.
 - f. “Helpdesk Support” shall mean the 24x7x365 center which shall handle Fault reporting, Trouble Ticketing and related enquiries during this contract.
 - g. “Response Time” shall mean the time incident is reported to the help desk and an engineer is assigned for the call.
 - h. “Resolution Time” shall mean the time taken (after the incident has been reported at the helpdesk), in resolving (diagnosing, troubleshooting and fixing) or escalating (to the second level) getting the confirmatory details about the same from the SI and conveying the same to the end user), the services related troubles during the first level escalation.

5. The resolution time shall vary based on the severity of the incident reported at the help desk. The severity would be as follows:
 - a. Critical / High: Solution down impacting critical business functions or multiple modules/functions down impacting users on daily operations or any module /functionality deemed as highly critical by BSCDCL .
 - b. Medium: One module/functionality down impacting critical business functions having major impact on daily operations.
 - c. Low: Loss of business functionality for less than 10 users impacting day to day operations or minor functionality down impacting less than 10 users.
6. The SLAs have been logically segregated in the following categories:
 - a. System Development
 - b. Deployment of Manpower
 - c. System Performance
 - d. Sensor/ Output Device/ Panel Performance
 - e. Training
 - f. Audit
 - g. Helpdesk Support/Issue Response and Resolution
 - h. Functional Support
 - i. Change Request
 - j. Reporting

Commencement of SLA: The SLA shall commence from implementation period itself for adherence to the implementation plan. The penalty will be deducted from the next payment milestone during the implementation period. During the O & M period, the penalty will be deducted from the quarterly payments.

System Development

Sr. No	Parameter	Metric	Basis	Penalty
1.	Adherence to planned implementation schedule. <ul style="list-style-type: none"> • Project Initiation • Team Mobilization • User Acceptance Testing • Implementation, Stabilization, Operational Acceptance 	The delay for each milestone as per the planned schedule should not exceed more than a week without a justified reason agreed and approved by BSCDCL. Thereafter for each week of delay, penalty will be levied.	Per Occurrence	0.01% of the contract value for the first week and 0.02% of the total contract value for every subsequent week subject to a maximum of 5% post which BSCDCL may invoke annulment of the contract. The penalty will be levied for delay in all the waves and phases for reason attributable to the

Sr. No	Parameter	Metric	Basis	Penalty
				vendor.
2.	Submission of deliverables as relevant to the individual milestones/stages Various deliverables such as <ul style="list-style-type: none"> • Inception Report • Survey Report • Project Plan • Quality Plan • Design Documents • SRS • Test Cases and results • User Manuals • Training Manual • Technical Documents etc. 	To be submitted within 10 days of the completion of the individual milestone.	Per Occurrence	0.01% of the contract value for the first week and 0.02% of the total contract value for every subsequent week subject to a maximum of 5% post which BSCDCL may invoke annulment of the contract. The penalty will be levied for delay in all the waves and phases for reason attributable to the vendor.

Deployment of Manpower

Sr. No	Parameter	Metric	Basis	Penalty
1.	Mobilisation of the team for commencement of work	Within 2 weeks from the date of issue of the LoI/Purchase/Work Order	Per Occurrence	0.005% of the contract value for the first week and 0.01% of the total contract value for second week subject to a maximum delay of 2 weeks post which BSCDCL may invoke annulment of the contract.
2.	Replacement of resources	Within 15 days of release of existing resource initiated either by BSCDCL or the System Integrator. The resource should be of equivalent or higher qualification and experience.	Per occurrence	0.005% of the contract value per week of delay for deployment of alternate resource

System Performance

Sr. No	Parameter	Target	Basis	Penalty
1.	Average Response Time during peak usage hours as measured by EMS tool	Less than or equal to 10 seconds	Per occurrence. This will be calculated monthly after the implementation.	Per month penalty of 0.01 % of the total contract value will be levied up to a maximum of 5 %
2.	Application Uptime <ul style="list-style-type: none"> • Database Server Uptime • Application Server Uptime • Web Server Uptime • Any other IT component in the Infrastructure Architecture 	>= 99.95%	Per occurrence. This will be calculated monthly after the implementation.	post which BSCDCL may invoke Annulment of the contract. This will be deducted from the next payment milestone during the implementation period. During the O & M period, the penalty will be deducted from the quarterly payments.

Sensor and Device Performance

Sr. No	Parameter	Target	Basis	Penalty
1.	Average Uptime of all Sensors/ Output Devices/ Panels	>= 99.95%	Per occurrence. This will be calculated monthly after the implementation.	Per month penalty of 0.01 % of the total contract value will be levied up to a maximum of 5 % post which BSCDCL may invoke Annulment of the contract. This will be deducted from the next payment milestone during the implementation period. During the O & M period, the penalty will be deducted from the quarterly payments.

Sr. No	Parameter	Target	Basis	Penalty
2	Replacement of a faulty sensor equipment/ output devices/ panels	Within 24 hours of the incident	Per Occurrence	Rs. 1000 per occurrence of failure to replace the sensor equipment/ output device/ panel

Audit

Sr. No	Parameter	Target	Basis	Penalty
1.	Third Party Audit Certificate for the entire system and the action taken report by the System Integrator	Once every year	Per occurrence	0.01% of total contract value per breach.

Training

Sr. No	Parameter	Metric	Frequency/basis	Penalty
1.	Adherence to training timetable	95% of the batches at individual institutions to be conducted as per planned schedule.	Batches planned per institution	0.001% of total contract value per breach per batch.
2.	Training Feedback from Participants and training completion certification	75% of the participants in a batch to offer a feedback rating of 3 or above on a scale of 1 to 5.	Feedback Per batch	0.001% of total contract value per breach per batch.

Helpdesk Support/Issue Response and Resolution

Sr. No	Parameter	Target	Basis	Penalty
1.	Severity 3 Issue (Low)	Response Time <= 2 hours from the time the call is logged by the end user. Resolution Time <= 6 hours from the time the complaint/query is allocated for resolution by the helpdesk.	Per Incident	0.01% of total contract value for every additional 2 hours of delay subject to a maximum of 5% of the contract value post which BSCDCL may invoke annulment of the contract.
2.	Severity 2 Issue (Medium)	Response Time <= 1 hour from the time the call is logged by the end user. Resolution Time <= 1 day from the time the complaint/query is allocated for resolution by the helpdesk.	Per Incident	0.01% of total contract value for every additional day subject to a maximum of 5% of contract value post which BSCDCL may invoke annulment of the contract.
3.	Severity 1 Issue (Critical)	Response Time <= 30 minutes from the time the call is logged by the end user. Resolution Time <= T (As agreed up on by BSCDCL and IA) from the time the complaint/query is allocated for resolution by the helpdesk.	Per Incident	0.01% of total contract value for every additional T + 1 day delay subject to a maximum of 5% of contract value, post which BSCDCL may invoke annulment of the contract.
4.	Average Call Lost Rate (Total No. Of calls lost because they were not attended by an operator / Total incoming calls)*100	<=1%	Per Month	0.005% of total contract value for every additional 1% call lost subject to a maximum of 5% of contract value, post which BSCDCL may invoke annulment of the contract.

Functional Support

Sr. No	Parameter	Target	Basis	Penalty
1.	Satisfaction rating	Minimum satisfactory rating of 3 or above on a scale of 1 to 5 for the overall monthly performance of the Functional Support resource provided by the reporting officer.	Feedback received	0.001% of total contract value for each unsatisfactory report received.

Change Request

Sr. No	Parameter	Metric	Basis	Penalty
1.	Criticality of Change – Low	$\leq T+2$ weeks, where T is the timeframe for completion of the Change request as agreed upon by BSCDCL and the System Integrator	Weekly per Occurrence	0.01% of total contract value per week for the first two weeks for each occurrence, 0.05% of total contract value per week for every subsequent week, subject to a maximum of 5% post which BSCDCL may invoke annulment of the contract.
2.	Criticality of Change – Medium	$\leq T+1$ weeks, where T is the timeframe for completion of the Change request as agreed upon by BSCDCL and the System Integrator	Weekly per Occurrence	0.02% of total contract value per week for the first two weeks for each occurrence, 0.05% of total contract value per week for every subsequent week, subject to a maximum of 5% post which BSCDCL may invoke annulment of the contract.
3.	Criticality of Change – High	$\leq T$ weeks, where T is the timeframe for completion of the Change request as agreed upon by BSCDCL and the System Integrator	Weekly per Occurrence	0.03% of total contract value per week for the first two weeks for each occurrence, 0.05% of total contract value per week for every subsequent week, subject to a maximum of 5% post which

Sr. No	Parameter	Metric	Basis	Penalty
				BSCDCL may invoke annulment of the contract.

SLA for Cameras

Category	Service Description	Level	Measuring Duration	Measurement			Measured by
				Baseline	Lower	Critical	
Camera, Video Feed Uptime and Quality	Uptime per camera (live feed available irrespective of bandwidth or last mile issues, which are in control of SI)		Daily	97%	>= 92% to <97%	<92%	VMS
Camera, Video Feed Uptime and Quality	At CFCS and FCS: Live camera feed available from selected cameras for viewing) at any given time		Daily	97%	>=92% to <97%	<92%	VMS/ Physical Checks
Camera, Video Feed Uptime and Quality	Quality of video feeds (bad feeds due to video jitter, dim, blurred, unfocused, obstructed, non-aligned feeds*)		Daily	97%	>=94% to 97%	<94%	VMS
Camera, Video Feed Uptime and Quality	Average frame rate maintained for viewing (of all daily recorded feeds)		Daily	88%	80.01 to 88 %	<80%	VMS
Camera, Video Feed Uptime and Quality	Average frame rate maintained for recording		Daily	95%	90 to 95%	<90%	VMS
Camera, Video Feed Uptime and Quality	Video stream latency refers to the average time required for transmission of video feed from one point to another		Daily	=<40 ms	>40 to 50 ms	>50 ms	VMS
Camera, Video Feed	Uptime per camera (live feed available		Daily	99%	>= 96.5%	<96%	VMS

Category	Service Description	Level	Measuring Duration	Measurement			Measured by
				Baseline	Lower	Critical	
Uptime and Quality	irrespective of bandwidth or last mile issues, which are in control of SI)				to <99%		
Application Performance	Overall application(s) availability at CFCS and FCS		Daily	<2 sec	2.01 to 4.0 secs	>4 sec	EMS
Application Performance	Maximum time for user login at Command Center		Daily	<5 secs	5.01 to 10.0 secs	>10 secs	EMS
Application Performance	Maximum time for surveillance application(s) opening, this includes any application deployed for the project at CFCS and FCS		Daily	<2 sec	2.01 to 5.0 sec	>5 secs	EMS
Application Performance	Menu navigation, window/ screen opening, screen navigation (average) at CFCS and FCS		Daily	<2 sec	2.01 to 6.0 sec	>6 secs	EMS
Application Performance	Retrieval of video feeds at CFCS and FCS (based on complexity of query)		Daily	Simple query: <5 sec Medium query: <30 sec High query: <60 sec	Simple query: 5.01 to 10 sec Medium query: 10.01 to 15 sec High query: <15.1 sec to 60 sec	Simple query: >10 sec Medium query: >15 sec High query: >60 sec	VMS
Application Performance	Reports generation response time (alerts/MIS/logs, etc.)		Daily	<3 sec	3.01 to 5.0 sec	>5 sec	VMS

Category	Service Description	Level	Measuring Duration	Measurement			Measured by
				Baseline	Lower	Critical	
Application Performance	Maximum time for successful camera settings modification (in online mode)		Daily	99%	>=97% to <99%	<97%	Work Logs
End-User Equipment Uptime	Monitoring workstations / Desktops	/	Daily	99%	>=97% to <99%	<97%	NMS
End-User Equipment Uptime	LED display screens		Daily	99.9%	>=99.5% to <99.9%	<99.5%	EMS

Reporting during pre-implementation, implementation and post implementation phases (including Operations and Maintenance Phase)

Type	Measurement	Penalty
Weekly Status Report	Delivered on a weekly basis	No Penalty
Monthly Status Report	Delivered at monthly intervals by the 5 th of every month with the details of the previous month. The format of the report shall be mutually agreed between BSCDCL and the IA	0.001% of total contract value per additional week delay subject to a maximum delay 8 weeks

Note:

1. The down time will be calculated on monthly basis. Non-adherence to any of the services as mentioned below will lead to penalty as per the SLA clause and will be used to calculate downtime. The downtime calculated shall not include the following
 - a. Down time due to hardware/software and application which is owned by BSCDCL or any other agency at their premises
 - b. Negligence or other conduct of BSCDCL or its agents, including a failure or malfunction resulting from applications or services provided by BSCDCL or its vendors.
 - c. Failure or malfunction of any equipment or services not provided by the Bidder.
2. However, it is the responsibility/ onus of the selected Bidder to prove that the outage is attributable to BSCDCL. The selected Bidder shall obtain the proof authenticated by the BSCDCL's official that the outage is attributable to the BSCDCL or other concerned authority.
3. The maximum penalty will be up to 5% of total project cost as per the Commercial bid submitted by the Bidder

4. The Agency shall deploy sufficient manpower suitably qualified and experienced in shifts to meet the SLA. Agency shall appoint as many team members as deemed fit by them, to meet the time Schedule and SLA requirements.
5. Once a maximum penalty of 5% of the contract value is reached, BSCDCL has the right to call for the annulment of contract.

5.1 Professional Project Management

System Integrator shall execute the project with complete professionalism and full commitment to the scope of work and the prescribed service levels. System Integrator shall attend regular Project Review Meetings scheduled by BSCDCL and shall adhere to the directions given during the meeting. Following responsibilities are to be executed by the System Integrator in regular manner to ensure the proper management of the project:

- a. Finalization of the Project plan in consultation with BSCDCL and its consultant. Project Plan should consist of work plan, communication matrix, timelines, Quality Plan, Configuration Management Plan, etc.
- b. Plan and deploy the resources in conjunction with the Project Plan and to execute roles and responsibilities against each activity of the project plan
- c. Preparation and regular update of the Risk Register and the Mitigation Plan. Timely communication of the same to all the identified project stakeholders
- d. Submission of Weekly Project Progress Reports
- e. Monthly Compliance report, which will cover compliances to Project Timelines, Project Team, Hardware and Software delivered, SLAs, etc.

5.2 Use and Acquisition of Assets during the term

The System Integrator shall:

1. Take all reasonable and proper care of the entire hardware and software, network or any other information technology infrastructure components used for the project and other facilities leased/owned by the System Integrator exclusively in terms of the delivery of the services as per this CA (hereinafter the “Assets”) in proportion to their use and control of such Assets which will include all upgrades/enhancements and improvements to meet the needs of the project arising from time to time
2. Term “Assets” also refers to all the hardware / Software / furniture / data / documentations / manuals / catalogues / brochures / or any other material procured, created or utilized by the System Integrator or BSCDCL for Information and Communication Technology (ICT) Upgradation and Enablement of Fire Services.
3. Keep all the tangible Assets in good and serviceable condition (reasonable wear and tear excepted) suitably upgraded subject to the relevant standards as stated in the bid to meet the SLAs mentioned in the contract and during the entire term of the Agreement

4. Ensure that any instructions or manuals supplied by the manufacturer of the Assets for use of Assets and which are provided to the System Integrator will be followed by the System Integrator and any person who will be responsible for the use of the Asset
5. Take such steps as may be recommended by the manufacturer of the Assets and notified to the System Integrator or as may be necessary to use the Assets in a safe manner
6. To the extent that the Assets are under the control of the System Integrator, keep the Assets suitably housed and in conformity with any statutory requirements from time to time applicable to them
7. Not, knowingly or negligently use or permit any of the Assets to be used in contravention of any statutory provisions or regulation or in any way contrary to law
8. Use the Assets exclusively for the purpose of providing the Services as defined in the contract
9. Ensure the integration of the software with hardware to be setup and the current Assets in order to ensure the smooth operations of the entire solution architecture to provide efficient services to BSCDCL of this Project in an efficient and speedy manner
10. System Integrator shall not use BSCDCL data to provide services for the benefit of any third party, as a service bureau or in any other manner

5.3 Security and safety

1. The System Integrator will comply with the directions issued from time to time by BSCDCL and the standards related to the security and safety in so far as it applies to the provision of the Services
2. Adherence to basic e-Governance Guidelines and Standards for data structure (if any) shall be adhered to.
3. System Integrator shall also comply with BSCDCL / Government of Madhya Pradesh's/ Government of India's information technology security and standard policies in force from time to time as applicable. BSCDCL shall share the relevant guidelines and standards to the System Integrator upon signing of the CA.
4. System Integrator shall use reasonable endeavors to report forthwith in writing to all the partners / contractors about the civil and criminal liabilities accruing due to any unauthorized access (including unauthorized persons who are employees of any Party) or interference with BSCDCL's data, facilities or Confidential Information.
5. The System Integrator shall upon reasonable request by BSCDCL or his/her nominee(s) participate in regular meetings when safety and information technology security matters are reviewed.
6. System Integrator shall promptly report in writing to BSCDCL any act or omission which they are aware that could have an adverse effect on the proper conduct of safety and information technology security at BSCDCL.

5.4 Indemnity

The System Integrator agrees to indemnify and hold harmless BSCDCL, its officers, employees and agents(each an "Indemnified Party") promptly upon demand at any time and from time to time, from

and against any and all losses , claims, damages, liabilities, costs (including reasonable attorney’s fees and disbursements) and expenses (collectively, “Losses”) to which the Indemnified Party may become subject, in so far as such losses directly arise out of, in any way relate to, or result from

1. Any mis-statement or any breach of any representation or warranty made by the System Integrator or
1. The failure by the System Integrator to fulfill any covenant or condition contained in this Agreement, including without limitation the breach of any terms and conditions of this Agreement by any employee or agent of the System Integrator. Against all losses or damages arising from claims by third Parties that any Deliverable (or the access, use or other rights thereto), created by System Integrator pursuant to this Agreement, or any equipment, software, information, methods of operation or other intellectual property created by System Integrator or sub-contractors pursuant to this Agreement, or the SLAs (I) infringes a copyright, trade mark, trade design enforceable in India, (II) infringes a patent issued in India, or (III) constitutes misappropriation or unlawful disclosure or use of another Party’s trade secretes under the laws of India (collectively, “Infringement Claims”); provided, however, that this will not apply to any Deliverable (or the access, use or other rights thereto) created by Third Parties (i.e., other than System Integrator or sub-contractors) at the direction of BSCDCL, or
2. Any compensation / claim or proceeding by any third party against BSCDCL arising out of any act, deed or omission by the System Integrator or
3. Claim filed by a workman or employee engaged by the System Integrator for carrying out work related to this Agreement. For the avoidance of doubt, indemnification of Losses pursuant to this section shall be made in an amount or amounts sufficient to restore each of the Indemnified Party to the financial position it would have been in had the losses not occurred.

Any payment made under this Agreement to an indemnity or claim for breach of any provision of this Agreement shall include applicable taxes.

5.5 Third Party Claims

1. Subject to Sub-clause (b) below, the System Integrator (the “Indemnified Party”) from and against all losses, claims litigation and damages on account of bodily injury, death or damage to tangible personal property arising in favor or any person, corporation or other entity (including the Indemnified Party) attributable to the Indemnifying Party’s performance or non-performance under this Agreement or the SLAs.
4. The indemnities set out in Sub-clause (a) above shall be subject to the following conditions:
 - a. The Indemnified Party, as promptly as practicable, informs the Indemnifying Party in writing of the claim or proceedings and provides all relevant evidence, documentary or otherwise;
 - b. The Indemnified Party shall, at the cost and expenses of the Indemnifying Party, give the Indemnifying Party all reasonable assistance in the defense of such claim including reasonable access to all relevant information, documentation and personnel. The

indemnifying party shall bear cost and expenses and fees of the Attorney on behalf of the Indemnified Party in the litigation, claim.

- c. If the Indemnifying Party does not assume full control over the defense of a claim as provided in this Article, the Indemnifying Party may participate in such defense at its sole cost and expense, and the Indemnified Party will have the right to defend the claim in such manner as it may deem appropriate, and the cost and expense of the Indemnified Party will be borne and paid by the Indemnifying Party.
- d. The Indemnified Party shall not prejudice, pay or accept any proceedings or claim, or compromise any proceedings or claim, without the written consent of the Indemnifying Party;
- e. System Integrator hereby indemnify and hold indemnified BSCDCL harmless from and against any and all damages, losses, liabilities, expenses including legal fees and cost of litigation in connection with any action, claim, suit, proceedings as if result of claim made by the third party directly or indirectly arising out of or in connection with this agreement.
- f. All settlements of claims subject to indemnification under this Article will: (a) be entered into only with the consent of the Indemnified Party, which consent will not be unreasonably withheld and include an unconditional release to the Indemnified Party from the claimant for all liability in respect of such claim; and (b) include any appropriate confidentiality agreement prohibiting disclosure of the terms of such settlement;
- g. The Indemnified Party shall take steps that the Indemnifying Party may reasonably require to mitigate or reduce its loss as a result of such a claim or proceedings; and
- h. If the Indemnifying Party is obligated to indemnify an Indemnified Party pursuant to this Article, the Indemnifying Party will, upon payment of such indemnity in full, be subrogated to all rights and defenses of the Indemnified Party with respect to the claims to which such indemnification relates;
- i. In the event that the Indemnifying Party is obligated to indemnify the Indemnified Party pursuant to this Article, the Indemnified Party will be entitled to invoke the Performance Bank Guarantee, if such indemnity is not paid, either in full or in part, and on the invocation of the Performance Bank Guarantee, the Indemnifying Party shall be subrogated to all rights and defenses of the Indemnified Party with respect to the claims to which such indemnification relates.

5.6 Publicity

Any publicity by the System Integrator in which the name of BSCDCL is to be used should be done with the explicit written permission of BSCDCL authorities.

5.7 Warranties

1. The System Integrator warrants and represents to BSCDCL that:
 - a. It has full capacity and authority and all necessary approvals to enter into and to perform its obligations under this Agreement;
 - b. This Agreement is executed by a duly authorized representative of the System Integrator;
 - c. It shall discharge its obligations under this Agreement with due skill, care and diligence so as to comply with the service level agreement.
2. In the case of the SLAs, the System Integrator warrants and represents to BSCDCL, that:
 - a. The System Integrator has full capacity and authority and all necessary approvals to enter into and perform its obligations under the SLAs and to provide the Services;
 - b. The SLAs shall be executed by a duly authorized representative of the System Integrator;
 - c. The Services will be provided and rendered by appropriately qualified, trained and experienced personnel as mentioned in the bid;
 - d. System Integrator has and will have all necessary licenses, approvals, consents of third Parties free from any encumbrances and all necessary technology, hardware and software to enable it to provide the Services;
 - e. The Services will be supplied in conformance with all laws, enactments, orders and regulations applicable from time to time;
 - f. System Integrator will warrant that the solution provided under the contract is new, of the most recent higher version /models and incorporate all recent improvements in design and materials unless provided otherwise in the contract.
 - g. The System Integrator shall ensure defect free operation of the entire solution and shall replace any such components, equipment's, software and hardware which are found defective and during the entire contract period the System Integrator shall apply all the latest upgrades/patches/releases for the software after appropriate testing. No additional costs shall be paid separately for the warranty other than what are the costs quoted by the System Integrator and as specified in the contract.
 - h. If the System Integrator uses in the course of the provision of the Services, components, equipment's, software and hardware manufactured by any third party and which are embedded in the Deliverables or are essential for the successful use of the Deliverables, it will pass-through third-party manufacturer's Warranties relating to those components, equipment, software and hardware to the extent possible.
3. Notwithstanding what has been stated elsewhere in this Agreement and the Schedules attached herein, in the event the System Integrator is unable to meet the obligations pursuant to the Implementation of any other project, Operations and Maintenance Services and any related scope of work as stated in this Agreement and the Schedules attached herein, BSCDCL will have the option to invoke the Performance Guarantee after serving a written notice of thirty (30) days to the System Integrator.
4. All equipment's shall be under warranty for first three years.

5.8 Force Majeure

The System Integrator shall not be liable for forfeiture of its Performance Guarantee, imposition of liquidated damages or termination for default, if and to the extent that its delay in performance or other failure to perform its obligations under the contract is the result of an event of Force Majeure. For purposes of this Clause, "Force Majeure" means an event beyond the "reasonable" control of the System Integrator, not involving the System Integrator's fault or negligence and not foreseeable. Unforeseen circumstances or causes beyond the control of the System Integrator include but are not limited to acts of God, war, riot, acts of civil or military authorities, fire, floods, accidents, terrorist activity, strikes or shortages of transportation facilities, fuel, energy, labor or material.

For the System Integrator to take benefit of this clause it is a condition precedent that the System Integrator must promptly notify BSCDCL, in writing of such conditions and the cause thereof within five calendar days of the arising of the Force Majeure event. BSCDCL, or the consultant / committee appointed by BSCDCL shall study the submission of the System Integrator and inform whether the situation can be qualified one of Force Majeure. Unless otherwise directed by BSCDCL in writing, the System Integrator shall continue to perform its obligations under the resultant Agreement as far as it is reasonably practical, and shall seek all reasonable alternative means for performance of services not prevented by the existence of a Force Majeure event.

In the event of delay in performance attributable to the presence of a force majeure event, the time for performance shall be extended by a period(s) equivalent to the duration of such delay. If the duration of delay continues beyond a period of 30 days, BSCDCL and the System Integrator shall hold consultations with each other in an endeavor to find a solution to the problem.

Notwithstanding anything to the contrary mentioned above, the decision of BSCDCL shall be final and binding on the System Integrator.

5.9 Resolution of Disputes

BSCDCL and the System Integrator shall make every attempt to resolve dispute amicably, by direct information, negotiations of any disagreement or dispute arising between them under or in connection with this agreement.

All differences disputes arising under and out of these present, or in connection with this agreement shall be referred to the Chief Executive Officer of BSCDCL as a sole Arbitrator. If the Bidder doesn't agree with the opinion of the Chief Executive Officer of BSCDCL the matter shall be referred to two Arbitrators: one Arbitrator to be nominated by BSCDCL and the other to be nominated by the Bidder under the provisions of the Arbitration and Reconciliation Act of 1956 and the decision shall be final and binding on the parties.

5.10 Risk Purchase Clause

In the event System Integrator fails to execute the project as stipulated in the CA, or as per the directions given by BSCDCL from time to time, BSCDCL reserves the right to procure similar services from the next eligible Bidder or from alternate sources at the cost of the System Integrator. Before taking such a decision, BSCDCL shall serve a notice period of one month to the System Integrator. System Integrator's liability in such case would not be higher than 50% of the total contract value.

5.11 Limitation of Liability towards BSCDCL

The System Integrator's liability under the resultant Agreement shall be determined as per the Law in force for the time being. The System Integrator shall be liable to BSCDCL for loss or damage occurred or caused or likely to occur on account of any act of omission on the part of the System Integrator and its employees, including loss caused to BSCDCL on account of defect in goods or deficiency in services on the part of System Integrator or his agents or any person / persons claiming through or under said System Integrator. However, such liability of System Integrator shall not exceed the total value of the Agreement.

5.12 Conflict of Interest

The System Integrator shall disclose to BSCDCL in writing, all actual and potential conflicts of interest that exist, arise or may arise (either for the System Integrator or its team) in the course of performing the Services as soon as it becomes aware of such a conflict. System Integrator shall hold BSCDCL's interest paramount, without any consideration for future work, and strictly avoid conflict of interest with other assignments.

5.13 Data Ownership

All the data created as the part of the project shall be owned by BSCDCL. The System Integrator shall take utmost care in maintaining security, confidentiality and backup of this data. Access to the data / systems shall be given by the System Integrator only to the personnel working on the projects and their names and contact details shall be shared with BSCDCL in advance. BSCDCL / its authorized representative(s) shall conduct periodic / surprise security reviews and audits, to ensure the compliance by the System Integrator to data / system security.

The ownership of the application for the three sub-systems and the data shall rest with BSCDCL.

5.14 Fraud and Corruption

BSCDCL requires that System Integrator must observe the highest standards of ethics during the execution of the contract. In pursuance of this policy, BSCDCL defines, for the purpose of this provision, the terms set forth as follows:

“Corrupt practice” means the offering, giving, receiving or soliciting of anything of value to influence the action of BSCDCL in contract executions.

“Fraudulent practice” means a misrepresentation of facts, in order to influence a procurement process or the execution of a contract, to BSCDCL, and includes collusive practice among bidders (prior to or after bid submission) designed to establish bid prices at artificially high or non-competitive levels and to deprive BSCDCL of the benefits of free and open competition.

“Undesirable practice” means (i) establishing contact with any person connected with or employed or engaged by BSCDCL with the objective of canvassing, lobbying or in any manner influencing or attempting to influence the Selection Process; or (ii) having a Conflict of Interest; and

“Restrictive practice” means forming a cartel or arriving at any understanding or arrangement among Bidders with the objective of restricting or manipulating a full and fair competition in the Selection Process.

“Coercive Practices” means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the execution of contract.

If it is noticed that the System Integrator has indulged into the Corrupt / Fraudulent / Undesirable / Coercive practices, it will be a sufficient ground for BSCDCL for termination of the contract and initiate black-listing of the vendor.

5.15 Exit Management

1. Exit Management Purpose

This clause sets out the provisions, which will apply during Exit Management period. The Parties shall ensure that their respective associated entities carry out their respective obligations set out in this Exit Management Clause.

The exit management period starts, in case of expiry of contract, at least 6 months prior to the date when the contract comes to an end or in case of termination of contract, on the date when the notice of termination is sent to the System Integrator. The exit management period ends on the date agreed upon by BSCDCL or three months after the beginning of the exit management period, whichever is earlier.

2. Confidential Information, Security and Data

System Integrator will promptly, on the commencement of the exit management period, supply to BSCDCL or its nominated agencies the following:

- a. Information relating to the current services rendered and performance data relating to the performance of the services; documentation relating to the project, project's customized source code; any other data and confidential information created as part of or is related to this project;
- b. Project data as is reasonably required for purposes of the project or for transitioning of the services to its replacing successful Bidder in a readily available format.
- c. All other information (including but not limited to documents, records and agreements) relating to the services reasonably necessary to enable BSCDCL and its nominated agencies, or its replacing vendor to carry out due diligence to transition the provision of the Services to BSCDCL or its nominated agencies, or its replacing vendor (as the case may be).
- d. The System Integrator shall retain all of the above information with them for 30 days after the termination of the contract, post which the provider has to wipe/purge/delete all information created or retained as part of this project.
- e. System Integrator will sign a Non-Disclosure Agreement with BSCDCL IT Department. The format for the same has been included.

3. Rights of Access to Information

At any time during the exit management period, the System Integrator will be obliged to provide an access of information to BSCDCL and / or any Replacing Vendor in order to make an inventory of the Assets (including hardware / Software / Active / passive), documentations, manuals, catalogues, archive data, Live data, policy documents or any other material related to implementation of project for BSCDCL.

4. Exit Management Plan

Successful Bidder shall provide BSCDCL with a recommended "Exit Management Plan" within 90 days of signing of the contract, which shall deal with at least the following aspects of exit management in relation to the SLA as a whole and in relation to the Project Implementation, the Operation and Management SLA and Scope of work definition.

- a. A detailed program of the transfer process that could be used in conjunction with a Replacement Vendor including details of the means to be used to ensure continuing provision of the services throughout the transfer process or until the cessation of the services and of the management structure to be used during the transfer;

- b. Plans for the communication with such of the Successful Bidder, staff, suppliers, customers and any related third party as are necessary to avoid any material detrimental impact on Project's operations as a result of undertaking the transfer;
- c. Plans for provision of contingent support to the implementation of hosted ILMS Project and Replacement Vendor for a reasonable period (minimum one month) after transfer.
- d. Exit Management Plan shall be presented by the System Integrator to and approved by BSCDCL or its nominated agencies.
- e. The terms of payment as stated in the Terms of Payment Schedule include the costs of the System Integrator complying with its obligations under this Schedule.
- f. During the exit management period, the System Integrator shall use its best efforts to deliver the services.
- g. Payments during the Exit Management period shall be made in accordance with the Terms of Payment Schedule.

5.16 Termination of contract

BSCDCL may, without prejudice to any other remedy under this Contract and applicable law, reserves the right to terminate for breach of contract by providing a written notice of 30 days stating the reason for default to the System Integrator and terminate the contract either in whole or in part:

- If the System Integrator fails to deliver any or all of the project requirements / operationalization / Operational Acceptance of project within the time frame specified in the contract; or
- If the System Integrator fails to perform any other obligation(s) under the contract.

Prior to providing a notice of termination to the System Integrator, BSCDCL shall provide the System Integrator with a written notice of 30 days instructing the System Integrator to cure any breach/default of the Contract, if BSCDCL is of the view that the breach may be rectified.

On failure of the System Integrator to rectify such breach within 30 days, BSCDCL may terminate the contract by providing a written notice of 30 days to the System Integrator, provided that such termination will not prejudice or affect any right of action or remedy which has accrued or will accrue thereafter to BSCDCL. In such an event the System Integrator shall be liable for penalty imposed by BSCDCL.

In the event of termination of this contract for any reason whatsoever, BSCDCL is entitled to impose any such obligations and conditions and issue any clarifications as may be necessary to ensure an efficient transition and effective continuity of the services which the System Integrator shall be obliged to comply with and take all available steps to minimize the loss resulting from that termination/breach, and further allow and provide all such assistance to BSCDCL and/ or succeeding vendor, as may be required, to take over the obligations of the System Integrator in relation to the execution/continued execution of the requirements of this contract.

5.17 Miscellaneous

1. Confidentiality

“Confidential Information” means all information including Project Data (whether in written, oral, electronic or other format) which relates to the technical, financial and operational affairs, business rules, citizen information, design rights, know-how and personnel of each Party and its affiliates which is disclosed to or otherwise learned by the other Party or its subcontractors (whether a Party to the contract or to the SLA) in the course of or in connection with the contract (including without limitation such information received during negotiations, location visits and meetings in connection with the contract or to the SLA) or pursuant to the contract to be signed subsequently.

Except with the prior written permission of BSCDCL, the System Integrator (including all partners) and its Personnel shall not disclose such confidential information to any person or entity not expected to know such information by default of being associated with the project, nor shall the System Integrator and its Personnel make public the recommendations formulated in the course of, or as a result of the project. In matters pertaining to privacy of data, the System Integrator (including all partners) shall not use any data for analytical/commercial reasons whatsoever.

The System Integrator recognizes that during the term of this Agreement, sensitive data will be procured and made available to it, its Sub contractors and agents and others working for or under the System Integrator. Disclosure or usage of the data by any such recipient may constitute a breach of law applicable causing harm not only to the Department whose data is used but also to its stakeholders. The function of BSCDCL requires the System Integrator, its Subcontractors and agents to demonstrate utmost care, sensitivity and strict confidentiality. Any breach of this Article will result in BSCDCL and its nominees receiving a right to seek injunctive relief and damages, from the System Integrator.

The restrictions of this Article shall not apply to confidential information that:

- a. Is or becomes generally available to the public through no breach of this Article by the Recipient; and
- b. Was in the recipient’s possession free of any obligation of confidence prior to the time of receipt of it by the Recipient hereunder; and
- c. Is developed by the Recipient independently of any of discloser’s Confidential Information; and
- d. Is rightfully obtained by the Recipient from third Parties authorized at that time to make such disclosure without restriction; and
- e. Is identified in writing by the Discloser as no longer proprietary or confidential; or
- f. Is required to be disclosed by law, regulation or Court Order, provided that the recipient gives prompt written notice to the Discloser of such legal and regulatory requirement to disclose so as to allow the Discloser reasonable opportunity to contest such disclosure.

To the extent that such disclosure is required for the purposes of this Agreement, either Party may disclose Confidential Information to:

- a. Its employees, agents and independent contractors and to any of its affiliates and their respective independent contractors or employees; and
- b. Its professional advisors and auditors, who require access for the purposes of this Agreement, whom the relevant Party has informed of its obligations under this Article and in respect of whom the relevant Party has informed of its obligations under this Article has used commercially reasonable efforts to ensure that they are contractually obliged to keep such Confidential Information confidential on terms substantially the same as set forth in this Article. Either Party may also disclose confidential Information or any entity with the other Party’s prior written consent.

The provisions of this Article shall survive the expiration or any earlier termination of this Agreement.

2. Standards of Performance

The System Integrator shall provide the services and carry out their obligations under the Contract with due diligence, efficiency and professionalism/ethics in accordance with generally accepted professional standards and practices. The System Integrator shall always act in respect of any matter relating to this contract. The System Integrator shall abide by all the applicable provisions / Acts / Rules / Regulations, Standing orders, etc of Information Technology standard as prevalent in the country. The System Integrator shall also conform to the standards laid down by Government of Gujarat or Government of India from time to time. Such standards and guidelines shall be shared with the System Integrator by BSCDCL up on signing of the Contract.

3. Sub Contracts

IA is not allowed to subcontract Core Fire Application/IT work. Sub-contracting is allowed for on boarding vendors like Cloud Service Provider (CSP), ISP and for non-ICT or civil work (if any) and procurement /Installation of IT Components. A tripartite agreement between BSCDCL, IA and ISP shall be required.

4. Care to be taken while working at BSCDCL Office

System Integrator should follow instructions issued by concerned Competent Authority from time to time for carrying out work at designated places. System Integrator should ensure that there is no damage caused to any private or public property. In case such damage is caused, System Integrator shall immediately bring it to the notice of concerned organization and BSCDCL in writing and pay necessary charges towards fixing of the damage.

System Integrator shall ensure that its employees/representatives don't breach privacy of any citizen or establishment during the course of execution or maintenance of the project.

5. Compliance with Labor regulations

The System Integrator shall pay fair and reasonable wages to the workmen employed, for the contract undertaken and comply with the provisions set forth under the Minimum wages Act and the Contract Labour Act 1970. The salary of the manpower working on BSCDCL project should be paid using ECS / NEFT / RTGS. A record of the payments made in this regard should be maintained by the System Integrator. Upon request, this record shall be produced to the appropriate authority in BSCDCL and/or Judicial Body. If complaints are received by BSCDCL (or any appropriate authority) appropriate action (Liquidation of Security Deposit, Blacklisting, etc.) may be initiated as deemed necessary against the System Integrator.

6. Independent Contractor

Nothing in this Agreement shall be construed as establishing or implying any partnership or joint venture or employment relationship between the Parties to this Agreement. Except as expressly stated in this Agreement nothing in this Agreement shall be deemed to constitute any Party as the agent of any other Party or authorizes either Party (i) to incur any expenses on behalf of the other Party, (ii) to enter into any engagement or make any representation or warranty on behalf of the other Party, (iii) to pledge the credit of or otherwise bind or oblige the other Party, or (iv) to commit the other Party in any manner whatsoever in each case without obtaining the other Party's prior written consent.

7. Waiver

A waiver of any provision or breach of this Agreement must be in writing and signed by an authorized official of the Party executing the same. No such waiver shall be construed to affect or imply a subsequent waiver of the same provision or subsequent breach of this Agreement.

8. Notices

Any notice or other document, which may be given by either Party under this Agreement, shall be given in writing in person or by pre-paid recorded delivery post. In relation to a notice given under this Agreement, any such notice or other document shall be addressed to the other Party's principal or registered office address as set out below-

BSCDCL:

CEO, Bhopal Smart City Development Corporation Limited

Tel: -----

Fax: -----

System Integrator:

Tel: -----

Fax: -----

Any notice or other document shall be deemed to have been given to the other Party when delivered (if delivered in person) between the hours of 9.30 A.M and 5.30 P.M. at the address of the other Party set forth above or on the next working day thereafter if delivered outside such hours, and seven calendar days from the date of posting (if by letter).

9. Personnel/Employees

- a. Personnel/employees assigned by System Integrator to perform the services shall be employees of System Integrator and/or its sub-contractors, and under no circumstances will such personnel be considered as employees of BSCDCL. System Integrator shall have the sole responsibility for supervision and control of its personnel and for payment of such personnel's employee's entire compensation, including salary, legal deductions withholding of income taxes and social security taxes, worker's compensation, employee and disability benefits and the like and shall be responsible for all employer obligations under all laws as applicable from time to time. BSCDCL shall not be responsible for the above issues concerning to personnel of System Integrator.
- b. System Integrator shall use its best efforts to ensure that sufficient System Integrator personnel are employed to perform the Services, and that, such personnel have appropriate qualifications to perform the Services. BSCDCL or its nominated agencies shall have the right to require the removal or replacement of any System Integrator personnel performing work under this Agreement. In the event that BSCDCL requests that any System Integrator personnel be replaced, the substitution of such personnel shall be accomplished pursuant to a mutually agreed upon schedule and upon clearance of the personnel based on profile review and personal interview by BSCDCL or its nominated agencies as per defined SLAs. The System Integrator shall depute quality team for the project and as per requirements BSCDCL shall have the right to ask System Integrator to change the team.

- c. Management (Regional Head / VP level officer) of System Integrator needs to be involved in the project monitoring and should attend the review meeting at least once in a month.
 - d. The profiles of resources proposed by System Integrator in the technical bid, which are considered for Technical bid evaluation, shall be construed as ‘Key Personnel’ and the System Integrator shall not remove such personnel without the prior written consent of BSCDCL. For any changes to the proposed resources, System Integrator shall provide equivalent or more experienced resources in consultation with BSCDCL. The penalty applicable for replacement of ‘Key Personnel’ within the first six months of the contract shall be Rs. 1,00,000 per change in resource. Maximum one replacement is permissible in the first six months.
 - e. Except as stated in this clause, nothing in this Agreement will limit the ability of System Integrator freely to assign or reassign its employees; provided that System Integrator shall be responsible, at its expense, for transferring all appropriate knowledge from personnel being replaced to their replacements. BSCDCL shall have the right to review and approve System Integrator’s plan for any such knowledge transfer. System Integrator shall maintain the same standards for skills and professionalism among replacement personnel as in personnel being replaced.
 - f. Each Party shall be responsible for the performance of all its obligations under this Agreement and shall be liable for the acts and omissions of its employees and agents in connection therewith.
10. Variations and Further Assurance
- a. No amendment, variation or other change to this Agreement or the SLAs shall be valid unless made in writing and signed by the duly authorized representatives of the Parties to this Agreement.
 - b. Each Party to this Agreement or the SLAs agree to enter into or execute, without limitation, whatever other agreement, document, consent and waiver and to do all other things which shall or may be reasonably required to complete and deliver the obligations set out in the Agreement or the SLAs.
11. Severability and Waiver
- a. If any provision of this Agreement or the SLAs, or any part thereof, shall be found by any court or administrative body of competent jurisdiction to be illegal, invalid or unenforceable the illegality, invalidity or unenforceability of such provision or part provision shall not affect the other provisions of this Agreement or the SLAs or the remainder of the provisions in question which shall remain in full force and effect. The relevant Parties shall negotiate in good faith in order to agree to substitute for any illegal, invalid or unenforceable provision a valid and enforceable provision which achieves to the greatest extent possible the economic,

legal and commercial objectives of the illegal, invalid or unenforceable provision or part provision within seven working days.

- b. No failure to exercise or enforce and no delay in exercising or enforcing on the part of either Party to this Agreement or the SLAs of any right, remedy or provision of this Agreement or the SLAs shall operate as a waiver of such right, remedy or provision in any future application nor shall any single or partial exercise or enforcement of any right, remedy or provision preclude any other or further exercise or enforcement of any other right, remedy or provision.

12. Survivability

The termination or expiry of this Agreement or the SLAs for any reason shall not affect or prejudice any terms of this Agreement, or the rights of the Parties under them which are either expressly or by implication intended to come into effect or continue in effect after such expiry or termination.

5.18 Applicable Law

The contract shall be governed by the laws and procedures prescribed by the Laws prevailing and in force in India, within the framework of applicable legislation and enactment made from time to time concerning such commercial dealings/processing. All legal disputes are subject to the jurisdiction of Bhopal courts only.

5.19 Compensation for Delay

The time allowed for carrying out the work as entered in the tender shall be strictly observed by the contractor and shall be reckoned from the date on which the order to commence work is given to the contractor. The work shall through the stipulated period of the contract be proceeded with, with all due diligence (time being deemed to be the essence of the contract on the part of the contractor) and the contractor shall pay as compensation an amount equal to one percent or such smaller amount as the Superintending Engineer (whose decision in writing shall be final) may decide, of amount of the estimated cost of the whole work as shown by tenderer for every day that the work remains uncompleted, or unfinished after the proper dates. And further to ensure good progress during execution of the work, the contractor shall be bound, in all cases in which the time allowed for any work exceeds one month to complete. The Contractor should complete the work as per phase period given below, which is arrived from the bar chart.

1. Design, manufacturing of all materials and supply of all materials at site. (As and when required)
2. Erection, testing, and commissioning (As and when required)

** Note: The quantity of the work to be done within a time to be specified above shall be fixed and inserted in the blank space kept for the purpose by the Officer competent to accept the contracts after taking into consideration the circumstances of each case abide by the program of detailed process laid down by the Executive Engineer.

In the event of the contractor failing to comply with this conditions he shall be liable to pay as compensation an amount equal to one percent or such smaller amount as the Superintending Engineer (whose decision in writing shall be final) may decide of the said estimated cost of the whole work for every day that the due quantity of work remains incomplete provided always that the total amount of compensation to be paid under the provisions of this clause shall not exceed 10 per cent of the

estimated cost of the work as shown in the tender. Superintending Engineer should be the final authority in this respect, irrespective of the fact that the tender is accepted by Chief Engineer. /Addl. Chief Engineer / Superintending Engineer / Executive Engineer of Assistant Engineer/Deputy Engineer.

5.20 Intellectual Property Rights (IPR) and Ownership Rights

1.1 **IPR:** BSCDCL shall own and have a right in perpetuity to use all newly created Intellectual Property Rights which have solely arisen out of or have been developed solely during execution of the Agreement, including but not limited to all processes, products, specifications, reports, drawings and other documents which have been newly created and developed by the System Integrator solely during the performance of the Services / delivery of Products and for the purposes of, inter-alia, use or sub-license of such Services under the Agreement. The System Integrator undertakes to disclose all such Intellectual Property Rights arising in performance of the Services to BSCDCL and execute all such agreements/documents and file all relevant applications, effect transfers and obtain all permits and approvals that may be necessary in this regard to effectively transfer and conserve the Intellectual Property Rights of BSCDCL.

1.2 Any / all Intellectual Property owned by the BSCDCL prior to the execution date and/ or any Intellectual Property Right applied for prior to the execution date shall strictly vest with the BSCDCL and the System Integrator shall have no right whatsoever on such Intellectual Property.

1.3 **Pre-existing work:** All intellectual property rights existing prior to the date of execution of the agreement shall belong to the Party that owned such rights immediately prior to such date. Subject to the foregoing, BSCDCL will also have rights to use and copy all intellectual property rights, process, specifications, reports and other document, drawings, manuals provided or used by the System Integrator as part of the Scope of Works under the RFP on non-exclusive, non-transferable, perpetual, royalty-free license to use basis.

1.4 System Integrator shall be obliged to ensure that all approvals, registrations, licenses, permits and rights etc. which are inter-alia necessary for use of the products, deliverables, services, applications, services etc. provided by the System Integrator under the RFP shall be acquired in the name of the BSCDCL and System Integrator shall have the non-exclusive, limited right to use such licenses till the term of the agreement on behalf of the BSCDCL solely for the purpose of execution of any of its obligations under the terms of the RFP. However, subsequent to the term of the agreement, such approvals, registrations, licenses, permits and rights etc. shall perpetually endure to the exclusive benefit of the BSCDCL.

1.5 **Third Party Products:** If license agreements are necessary or appropriate between the System Integrator and third parties for purposes of enabling / enforcing/implementing the provisions

hereinabove, the System Integrator shall enter into such agreements at its own sole cost, expense and risk and all such licenses etc. shall be bought in name of the BSCDCL unless otherwise directed in writing by BSCDCL.

1.6 Transfer of Risk and ownership in Products

- a. Subject to the terms of the RFP, System Integrator shall sell, assign, convey, transfer and deliver to BSCDCL, and BSCDCL shall purchase, receive and accept from the System Integrator, all right, title and interest in and to the products required to be provided by the System Integrator as per the RFP. The System Integrator shall not make any substitute for the products of any other model, capacity, or manufacturer without the prior written consent of BSCDCL which consent shall not be unreasonably delayed or withheld.
- b. System Integrator shall arrange for delivery of the Products to the delivery site identified by BSCDCL (the “Delivery Site”) as per the Timelines provided in the RFP unless otherwise notified by BSCDCL. In addition to paying all transportation charges for the Products, the System Integrator shall insure, and pay all insurance charges for the products.
- c. Title to and ownership of the Products designated as being purchased by BSCDCL hereunder shall remain vested in the System Integrator until written acceptance and go live by BSCDCL under the terms hereof, at which time title to and ownership of such products shall transfer to BSCDCL. System Integrator shall execute such documents as may be required by BSCDCL for documenting the transfer of title and ownership of products. Upon transfer of ownership of the Products to BSCDCL, the System Integrator shall treat such Products as Assets as detailed above in the Agreement.

5.21 Performance Bank Guarantee

1. The successful bidder shall at his own expense, deposit with department, within 15 days of issuance of LoI, an unconditional and irrevocable Performance Bank Guarantee (PBG) from a list of nationalized/scheduled banks given in this Bid Document, in favor of Bhopal Smart City Development Corporation Limited (BSCDCL) for the due performance and fulfilment of the contract by the bidder.
2. This Performance Bank Guarantee will be for an amount equivalent to 5% of quoted value. All charges whatsoever such as premium, commission, etc. with respect to the Performance Bank Guarantee shall be borne by the bidder.
3. The successful bidder shall maintain a valid and binding Performance Guarantee for a period of three months after the expiry of the Contract Period (“Validity Period”).
4. The Performance Bank Guarantee letter format can be found in the Annexure, section 8 of this document.
5. The Performance Bank Guarantee may be discharged/ returned by department upon being satisfied that there has been due performance of the obligations of the Bidder under the contract. However, no interest shall be payable on the Performance Bank Guarantee.
6. If the Bidder, fails to furnish the Performance Guarantee, it shall be lawful for the Authority to forfeit the EMD and cancel the contract or any part thereof

7. In the event of the Bidder being unable to service the contract for whatever reason, department would evoke the PBG. Notwithstanding and without prejudice to any rights whatsoever of department under the Contract in the matter, the proceeds of the PBG shall be payable to department as compensation for any loss resulting from the Bidder's failure to complete its obligations under the Contract. Department shall notify the Bidder in writing of the exercise of its right to receive such compensation within 14 days, indicating the contractual obligation(s) for which the Bidder is in default.

8. Department shall also be entitled to make recoveries from the Bidder's bills, performance bank guarantee, or from any other amount due to him, the equivalent value of any payment made to him due to inadvertence, error, collusion, misconstruction or misstatement.

5.22 Suspension of Work

1. Suspension of Work

1.1 System Integrator shall, if ordered in writing by the BSCDCL/ its Representative, suspend the performance of any services or provision of any product or any part thereof for such specified/ ordered period and time. BSCDCL shall inform the System Integrator about such suspension at least 15 days in advance. SI shall not be entitled to claim compensation for any loss or damage sustained by him by reason of such temporary suspension of the services for a continuous period of 30 days. BSCDCL may consider suitable compensation to the System Integrator in the event of suspension extending beyond the continuous period of 30 days. An extension of time for completion, corresponding with the delay caused by any such suspension of the works as aforesaid shall be granted to the SI, if written request for the same is made and that the suspension was not consequent to any default or failure on the part of the System Integrator. In case the suspension of works, is not consequent to any default or failure on the part of the System Integrator, and lasts for a period of more than 3 months, the System Integrator shall have the option to request the BSCDCL to pay reasonable mobilization and immobilization charges as may be consented by BSCDCL .

1.2 In the event BSCDCL suspends the progress of work for a period in excess of 30 days in aggregate, rendering the System Integrator to extend the System Integrator's Performance Guarantee then BSCDCL shall bear only the cost of extension of such bank guarantee for such extended period restricted to the normal bank rates as applicable in the banking procedures subject to the System Integrator producing the requisite evidence from the concerned bank.

5.23 Action on Complete Forfeiture of Security Deposit

In any case in which under any clause of- this contract the contractor shall have rendered himself liable to pay compensation amounting to the whole of this security deposit whether paid in one sum or deducted by instalments or in the case of abandonment of the work owing to serious illness or death of the contractor or any other cause the Engineer, on behalf of the BSCDCL, shall have power to adopt any of the following courses, as he may deem best suited to the interest of BSCDCL -

- a) To rescind the contract (for which rescission notice in writing to the contractor under the head of Executive Engineer shall be conclusive evidence) and in that case the security deposit of the contractor shall stand forfeited and be absolutely at the disposal of Government.

- b) To carry out the work or any part of the work departmentally debiting the contractor with the cost of the work, expenditure incurred on tools and plant, and charges on additional supervisory staff including the cost of work-charged establishment employed for getting the un-executed part of the work completed and crediting him with the value of the work done departmentally in all respects in the same manner and at the some rates as if it had been carried out by the contractor under the terms of his contract. The certificate of the Executive Engineer as to the costs and other allied expenses so incurred and as to the value of the work so done departmentally shall be final and conclusive against the contractor.
- c) To order that the work of .the contractor be measured up and to take such part thereof as shall be unexecuted out of his hands, and to give it to another contractor to complete, in which case all expenses incurred on advertisement for fixing a new contracting agency, additional supervisory staff including the cost of work charged establishment and the cost of the work executed by the new contract agency will be debited to the contractor and the value of the work done or executed through the new contractor shall be credited to the contractor in all respects and in the same manner and at the same rates as if it had been carried out by the contractor under the terms of his contract. The certificate of the Executive Engineer as to all the cost of the work and other expenses incurred as aforesaid for or in getting the unexecuted work done by the new contractor and as to the value of the work so done shall be final and conclusive against the contractor. In case the contract shall be rescinded under clause (a) above the contractor shall not be entitled to recover or be paid any sum for any work therefore actually performed by him under this contract unless and until the Executive Engineer shall have certified in writing the performance of the such work and the amount payable to him in respect thereof and he shall only be entitled to be paid the amount so certified. In the event of either of the courses referred to in clause (b) or (c) being adopted and the cost of the work executed departmentally or through a new contractor and other allied expenses exceeding the value of such work credited to the contractors the amount of excess shall be deducted from any money due to the contractor, by BSCDCL under the contract or otherwise howsoever or from his security deposit or the sale proceeds thereof provided, however, that contractor shall have to no claim against BSCDCL even if the certified value of the work done departmentally or through a new contractor exceeds the certified cost of such work and allied expenses, provided always that whichever of the three courses mentioned in clause (a) (b) or (c) is adopted by the Executive Engineer, the contractor shall have no claim to compensation for any loss sustained by him by reason of his having purchased or procured any materials, or entered into any engagements, or made any advance on account of or with a view to the execution of the work or the performance of the contract.

5.24 Payment terms

1. Terms of Payment

1.1 System Integrator alone shall invoice all payments after receiving due approval/acceptance of Products/Services / Deliverables from BSCDCL. Such invoices shall be correct and accurate and shall be raised in a timely manner.

1.2 Subject to accomplishment to obligations of System Integrator and delivery of Products/Services / Deliverables to the satisfaction of BSCDCL, payment shall be made by BSCDCL upon receipt of invoice along with supporting documents.

1.3 System Integrator's request for payment shall be made to the BSCDCL in writing, accompanied by an invoice describing, as appropriate,

(a) The Products and/or Services provided;

(b) When the Products and/or Services supplied are accepted; and

(c) All taxes, duties and other charges of the products and services have been duly paid by the System Integrator.

1.4 All payments agreed to be made by BSCDCL to the System Integrator in accordance with the Bid shall be inclusive of all, statutory levies, duties, taxes and other charges whenever levied/applicable including costs of maintenance, if any and BSCDCL shall not be liable to pay any such levies/other charges under or in relation to this Contract and/or the Services.

1.5 No invoice for extra work/ change order on account of change order will be submitted by the System Integrator unless the said extra work / change order has been authorized/ approved by the BSCDCL in writing.

1.6 In the event of BSCDCL noticing at any time that any amount has been disbursed wrongly to the System Integrator or any other amount is due from the System Integrator to the BSCDCL, BSCDCL may without prejudice to its rights recover such amounts by other means after notifying the System Integrator or deduct such amount from any payment falling due to the System Integrator. The details of such recovery, if any, will be intimated to the System Integrator. System Integrator shall receive the payment of undisputed amount under subsequent invoice for any amount that has been omitted in previous invoice by mistake on the part of the BSCDCL or the System Integrator.

1.7 The System Integrator shall be solely responsible to make payment to its personnel, sub-Bidders, OEMs, third parties.

1.8 Quarterly payments for O&M payment, post go live shall be released.

2. Deductions

2.1 BSCDCL shall be at liberty to deduct penalties/liquidated damages from the invoices raised by the System Integrator as calculated by BSCDCL for non-adherence to requirements.

2.2 All payments to the System Integrator shall be subject to the deductions of tax at source under Income Tax Act, and other taxes and deductions as provided for under any law, rule or regulation. All costs, damages or expenses which BSCDCL may have paid or incurred, for which under the provisions of the Contract, the System Integrator is liable, the same shall be deducted by BSCDCL from any dues to the System Integrator. All payments to the System Integrator shall be made after making necessary deductions as per terms of the Contract and recoveries towards facilities, if any, provided by the BSCDCL to the System Integrator on chargeable basis.

2.3 BSCDCL shall provide the System Integrator with the original tax receipt of any withholding taxes paid by BSCDCL or its nominated agencies on payments under the RFP within reasonable time

after payment. System Integrator agrees to reimburse and hold BSCDCL or its nominated agencies harmless from and against any claims, losses, expenses (including attorney fees, court fees) etc. arising out of deficiency (including penalties and interest) in payment of taxes that is the responsibility of the System Integrator.

3. Securities

3.1 Issuance of Securities

System Integrator shall provide the securities specified below in favor of the BSCDCL at the times, and in the amount, manner and form specified below.

3.2 Performance Security

System Integrator shall, within fifteen (15) days of the issuance of Purchase Order, provide an unconditional, irrevocable and continuing security for the due performance of the Contract as per the Bid Fact Sheet. The format of the Performance Security is provided in Format for Performance Security.

The performance security shall be valid for a period of 6 months beyond the expiry of the contract or any extended period. If the Performance Security is liquidated /encashed, in whole or in part, during the currency of the Performance Security, the System Integrator shall top up the Performance Security with the same amount as has been encashed within 15 days of such encashment without demur.

4. Taxes and Duties

4.1 For Products and/or Services supplied from outside the country, the System Integrator shall be entirely responsible for all taxes, stamp duties, license fees, and other such levies, payable in that country.

4.2 For Products and/or Services supplied locally, the System Integrator shall be entirely responsible for all taxes, duties, license fees, etc., incurred until delivery of the contracted Products or Services to the BSCDCL.

5.25 Stamp Duty Payment

The stamp duty payable for the contract shall be borne by the System Integrator IN WITNESS whereof the parties hereto have signed this on the day, month and year first herein above written.

Signed, sealed and delivered

By -----

-----,

For and on behalf of BSCDCL

Signed, sealed and delivered

By -----

For and on behalf of the “System Integrator”,

Witnesses:

- (1)
- (2)

Attachments to the Agreement:

1. Scope of Services for the System Integrator
2. Detail Commercial bid of the System Integrator accepted by BSCDCL
3. Corrigendum Document published by BSCDCL subsequent to the bid for this work
4. Bid Document of BSCDCL for this work
5. LoI issued by BSCDCL to the successful Bidder
6. The successful Bidder’s “Technical Bid” and “Commercial Bid” submitted in response to the bid

6 Section V: Project Implementation and Payment Schedule

6.1 Contract Price

- The Contract Price includes all duties, taxes, royalty and fees that may be levied in accordance with the laws and regulations in force as on the Base Date on the Contractor’s equipment, Materials and supplies acquired for the purpose of this RFP and on the services performed under this RFP. Nothing in this RFP shall relieve the Bidder from its responsibility to pay any tax, that may be levied in India (by any of the Government departments) on work execution OR profits made by it in respect of this RFP.
- Unless otherwise stated in the Agreement, the Contract Price covers all the Bidder’s obligations for work under the Agreement and all things necessary for the Construction and the remedying of any Defects in the Work.
- All payments under this Work Order shall be made in Indian Rupees.

6.2 Work Completion Timelines and Payment Terms

The payment schedule and milestones are divided into two phases:

- i. Implementation Phase
- ii. Operations and Maintenance Phase

BSCDCL shall issue a “Request Order” in writing, indicating the number of units of Hardware and Software as well as services to be supplied along with the location (Project Site). The BSCDCL shall continue to issue such request until the full quantities of Hardware and Software specified in within the variation limits of RFP is exhausted. Upon getting the Request Order, the SI shall promptly and as soon as possible within the lead time specified in the request order, supply, install and implement specified numbers of hardware and software at stated project site and commission the same. BSCDCL shall specify the Lead Time in Request Order. The Lead Time of Request Order shall be decided in discussion with the Service Provider before the Request Order is placed. BSCDCL’s decision in this regard shall be final but reasonable time shall be provided to the SI. Delay or non-performance will form the basis for

application of Liquidated Damages. Tentative number of Request Orders and Lead Time as envisaged at this point of time is specified below.

	Activities	Timelines for Completion of Milestones	Deliverables	Payment Schedule
	To = Date of issuance of work order Tg = Date of Go-Live declared by BSCDCL			
A	Project planning and mobilization	To+2 weeks	<ul style="list-style-type: none"> • Inception Report • Project Plan • Risk Management and Mitigation Plan 	Nil
B	Requirement Gathering	To + 6 Weeks	<ul style="list-style-type: none"> • Site survey report along with key observations which require intervention of the tendering authority. • Final BoQ 	15% of Schedule C
C	Solution Design	To + 7 weeks	<ul style="list-style-type: none"> • CONOPs Document • Functional Requirement Specifications Document • System Requirement Specifications Document • Requirement Traceability Matrix • FRS/SRS for application hosting on Cloud with all components 	15% of Schedule C
D	Software Development and Customization. Preparation of standard	To + 8 weeks	<ul style="list-style-type: none"> • GUI Design • Technical Architecture documents. 	15% of Schedule C

RFP – Selection of System Integrator for Information and Communication Technology (ICT) Upgradation and Enablement of Fire Services in Bhopal Smart City

Activities		Timelines for Completion of Milestones	Deliverables	Payment Schedule
	operating procedures and KPI's		<ul style="list-style-type: none"> • Network Architecture documents. • High Level Design Document, • Low Level Design Documents • SOP and KPI documents 	
E	Site Preparation and Delivery of Hardware in (Schedule A,B,&C)	To + 12 weeks	IT and Non- IT Infrastructure Installation Report	60% of Schedule A+60% of Schedule B
F	Acceptance of Hardware and Installation (Schedule A,B,&C)	To + 14 weeks	Integration and Testing Report	20% of Schedule A+20% of Schedule B
G	UAT for Software	To + 16 weeks	UAT Report	30% of Schedule C
H	Capacity building and training	To + 18 weeks	Training completion report	75% of Schedule E
I	IT and Fire Compliance before Go Live	To + 20 weeks	Audit Report	75% of Schedule D
J	Go Live	To + 24 weeks	Go- Live Report	10% of Schedule A+10% of Schedule B +15% of Schedule C + 15% of Schedule D+15% of Schedule E (Remaining CAPEX amount to be distributed in equal portions during the O&M payments on pro-rate basis)
H	Year 1 payment for O&M after Go-Live (Schedule F,G, H)	O&M	Quarterly O&M Report	<ul style="list-style-type: none"> • Q1 : 25% of Yearly Payment • Q2 : 25% of Yearly Payment • Q3 : 25% of Yearly Payment • Q4 : 25% of

Activities	Timelines for Completion of Milestones	Deliverables	Payment Schedule
			Yearly Payment • Remaining CAPEX value to be distributed during each year of O&M on pro-rata basis.
I Year 2 payment for O&M after Go-Live (Schedule F,G, H)	O&M	Quarterly O&M Report	• Q1 : 25% of Yearly Payment • Q2 : 25% of Yearly Payment • Q3 : 25% of Yearly Payment • Q4 : 25% of Yearly Payment • Remaining CAPEX value to be distributed during each year of O&M on pro-rata basis.
J Year 3 payment for O&M after Go-Live (Schedule F,G, H)	O&M	Quarterly O&M Report	• Q1 : 25% of Yearly Payment • Q2 : 25% of Yearly Payment • Q3 : 25% of Yearly Payment • Q4 : 25% of Yearly Payment • Remaining CAPEX value to be distributed during each year of O&M on pro-rata basis.

7 Section VIII: Bidding Formats

7.1 Formats for Clarification

7.1.1 Format for submission of Queries

[ON BIDDERS LETTERHEAD]

To

Date: DD/MM/YYYY

Sub: Submission of Clarification of Clarifications by <<firm name>>

Ref: Selection of System Integrator for Information and Communication Technology (ICT) Upgradation and Enablement of Fire Services in Bhopal Smart City (RFP No: _____ Dated: ___/___/____)

Dear Sir,

We have gone through the bid document and have the following queries. Request you to kindly address the same. We seek your clarification on the queries mentioned below.

#	Clause No in RFP	Page Number	Existing Clause	Query/Remarks

Date:

Signature of Authorized Representative

Name of SI:

Full Address:

Telephone No.:

7.2 Formats for Pre-Qualification Bid

7.2.1 Checklist for Pre-Qualification Bid

Sl. No.	Items	Submitted (Yes /No.)	Documentary Proof (Page No.)
1.	RFP Fee of RsXXXXXX/-		
2.	EMD of RsXXXlacs		
3.	PQ_1- Bid Cover letter		
4.	PQ_2- Bidder's Particulars		
5.	PQ_3- Power of attorney / board resolution to the authorized Signatory for Prime Bidder of Consortium		
6.	Copy of Certificate of Incorporation (In case of Consortium all members to submit)		
7.	Copy of Memorandum and Articles of Associations (In case of Consortium all members to submit)		
8.	Copy of GSTIN and PAN		
9.	Certificate from the statutory auditor/ CA towards positive net worth of the company.		
10.	Chartered Accountant certificate for Turnover for the last three financial year's i.e. 2016-17, 2017- 2018 and 2018-2019		
11.	Auditor's Certificate for turnover for bidder/each member of Consortium		
12.	Self-Declaration letter of Non-Black listing duly signed by authorized signatory on company letter head		
13.	Undertaking from OEM's on Products/Services		
14.	Statement of No Deviation from the RFP requirements		

Sl. No.	Items	Submitted (Yes /No.)	Documentary Proof (Page No.)
15.	Consortium Agreement with clear defining roles and responsibilities of each consortium partner.		
16.	Copy of Valid Standards/Certification		

7.2.2 Format for Pre-Qualification Bid Cover letter

[ON BIDDERS LETTERHEAD]

To

CEO

Bhopal Smart City Development Corporation Limited

Date: DD/MM/YYYY

Sub: Submission of Eligibility Proposal

Ref: Selection of System Integrator for Information and Communication Technology (ICT) Upgradation and Enablement of Fire Services in Bhopal Smart City (RFP No: _____ Dated: __/__/____)

Dear Sir,

Having examined the RFP, the receipt of which is hereby duly acknowledged, we, the undersigned, offer to product and services as required and outlined in the RFP. We attach hereto our responses to Eligibility Criteria.

We confirm that the information contained in these responses or any part thereof, including the exhibits, and other documents and instruments delivered or to be delivered to BSCDCL is true, accurate, verifiable and complete. This response includes all information necessary to ensure that the statements therein do not in whole or in part mislead the department in its short-listing process.

We fully understand and agree to comply that on verification, if any of the information provided here is found to be misleading the selection process, we are liable to be dismissed from the selection process or termination of the contract during the project, if selected to do so.

We agree for unconditional acceptance of all the terms and conditions set out in the RFP document and also agree to abide by this RFP response for a period of 180 days from the date fixed for bid opening.

We hereby declare that in case we are chosen as successful bidder, we shall submit the PBG in the form prescribed in the RFP. We do hereby undertake, that until a contract is prepared and executed, this bid together with your written acceptance thereof, the RFP and placement of letter of intent awarding the contract, shall constitute a binding contract between us.

We agree that you reserve the right in absolute sense to reject all or any of the products/ services specified in the RFP response with or without assigning any reason whatsoever.

It is hereby confirmed that I am entitled to act on behalf of our company/ corporation/ firm/ organization and empowered to sign this document as well as such other documents, which may be required in this connection.

Date:

Signature of Authorized Representative

Name of Bidder:

Full Address:

Telephone No.:

7.2.3 Format for Particulars of the Bidder

Details of the Bidder (Company)		
A.	Name of the Bidder	
B.	Address of the Bidder	
C.	Year of Incorporation	
D.	Registration Number & Registration Authority	
E.	Legal Status (Public/Private)	
F.	Name & Designation of the Authorized person to whom all references shall be made regarding this RFP	
G.	Telephone No. (with STD Code)	
H.	E-Mail of the Contact person:	
I.	Fax No. (with STD Code)	
J.	Website	
K.	Financial Detail (Organization's turnover of last three financial years)	FY 18-19:
		FY 17-18:
		FY 16-17:
L.	GSTIN Number	
M.	PAN	
N.	EMD Details	

Date:

Signature of Authorized Representative

Name of SI:

Full Address:

Telephone No.:

7.2.4 Power of Attorney for Lead Member of Consortium

Whereas the Bhopal Smart City Development Corporation Limited has invited applications from interested parties for the Selection of “Selection of System Integrator for Information and Communication Technology (ICT) Upgradation and Enablement of Fire Services in Bhopal Smart City (RFP No: _____ Dated: __/__/____)”.

Whereas _____,and _____ (Collectively “Consortium”) being Members of the Consortium are interested in bidding for the Project in accordance with the terms and conditions of the Request for Proposal (RFP document) and other connected documents in respect of the Project, and

Whereas, it is necessary for the Members of the Consortium to designate one of them as the Prime Member with all necessary power and authority to do for and on behalf of the Consortium, all acts, deeds and things as may be necessary in connection with the Consortium’s bid for the Project and its execution.

NOW, THEREFORE, KNOW ALL MEN BY THESE PRESENTS

I, _____ Having our Registered office at _____, (hereinafter collectively referred to as the “Principals”) do hereby irrevocably designate, nominate, constitute, appoint and authorize M/s. _____ having its registered office at _____, being one of the Members of the Consortium, as the Prime Member and true and lawful attorney of the Consortium (hereinafter referred to as the “Attorney”). We hereby irrevocably authorize the Attorney (with power to sub-delegate) to conduct all business for and on behalf of the Consortium and during the bidding process and, in the event the Consortium is awarded the concession/contract, during the execution of the Project and in this regard, to do on our behalf and on behalf of the Consortium, all or any of such acts, deeds or things as are necessary or required or incidental to the pre-qualification of the Consortium and submission of its bid for the Project, including but not limited to signing and submission of all applications, bids and other documents and writings, participate in bidders and other conferences, respond to queries, submit information/ documents, sign and execute contracts and undertakings consequent to acceptance of the bid of the Consortium and generally to represent the Consortium in all its dealings with the BSCDCL, and/ or any other Government Agency or any person, in all matters in connection with or relating to or arising out of the Consortium’s bid for the Project and/ or upon award thereof till the Concession Agreement is entered into with the BSCDCL.

AND hereby agree to ratify and confirm and do hereby ratify and confirm all acts, deeds and things done or caused to be done by our said Attorney pursuant to and in exercise of the powers conferred by this Power of Attorney and that all acts, deeds and things done by our said Attorney in exercise of the powers hereby conferred shall and shall always be deemed to have been done by us/ Consortium.

IN WITNESS WHEREOF WE THE PRINCIPALS ABOVE NAMED HAVE EXECUTED THIS POWER OF ATTORNEY ON THIS _____ DAY OF _____, 20....

For

(Signature)

.....

(Name & Title)

For

(Signature)

.....

(Name & Title)

Witnesses:

1.

2.

(Executants)

(To be executed by all the Member of the Consortium)

Notes:

- The mode of execution of the Power of Attorney should be in accordance with the procedure, if any, laid down by the applicable law and the charter documents of the executant(s) and when it is so required, the same should be under common seal affixed in accordance with the required procedure.
- Also, wherever required, the Bidder should submit for verification the extract of the charter documents and documents such as a board or shareholders' resolution/power of attorney in favor of the person executing this Power of Attorney for the delegation of power hereunder on behalf of the Bidder.
- For a Power of Attorney executed and issued overseas, the document will also have to be legalized by the Indian Embassy and notarized in the jurisdiction where the Power of Attorney is being issued. However, the Power of Attorney provided by Bidders from countries that have signed the Hague Legislation Convention, 1961 are not required to be legalized by the Indian Embassy if it carries a conforming Apostile certificate.

7.2.5 CA Certificate for net worth for bidder

Date: dd/mm/yyyy

To

Chief Executive Officer (CEO),
Bhopal Smart City Development Corporation Limited,
Zone 14, near Tatpar petrol pump, BHEL
Govindpura, Bhopal
Madhya Pradesh- 462023

Sir/Madam,

This is to certify that the Net worth as per books and records of _____
for the following financial years are as under.

S.No.	Financial Year ending	Networth (Rs in Crores)
1.	31 st March, 2019	

I further certify that I am competent officer in my company to make this declaration.

Yours Sincerely,

Signature of Auditor (with official seal)

Name :
Designation :
Address :
Telephone& Fax :
E-mail address :

7.2.6 Bidders Annual turnover (Turnover of Prime Bidder in the Consortium) & Turnover of Consortium member over last 3 financial years

<< To be submitted by each member company in case of Consortium on company's letterhead >>

Date: dd/mm/yyyy

To

Chief Executive Officer (CEO),
Bhopal Smart City Development Corporation Limited,
Zone 14, near Tatpar petrol pump, BHEL
Govindpura, Bhopal
Madhya Pradesh- 462023

Subject: Selection of System Integrator for Information and Communication Technology (ICT) Upgradation and Enablement of Fire Services in Bhopal Smart City (RFP No: _____ Dated: ___/___/____)

Sir/ Madam,

I have carefully gone through the Terms & Conditions contained in the RFP Document for Selection of Agency for procurement and maintenance of E-Vehicles for door to door waste collection in Bhopal City.

I hereby declare that below are the details regarding Overall turnover over last 3 financial years for our organization as well as the turnover of the consortium members over last 3 financial years.

#	Details	FY 2016-17 (in Crores) (i)	FY 2017-18 (in Crores) (ii)	FY 2018-19 (in Crores) (iii)	Average Turnover [(i)+(ii)+(iii)/3]
1	Overall Annual Turnover- Sole/Prime Bidder				

#	Details	FY 2016-17 (in Crores) (i)	FY 2017-18 (in Crores) (ii)	FY 2018-19 (in Crores) (iii)	Average Turnover [(iv)+(v)+(vi)/3]
1	Overall Annual Turnover- Consortium Member 2(if any)				
2	Overall Annual				

RFP – Selection of System Integrator for Information and Communication Technology (ICT) Upgradation and Enablement of Fire Services in Bhopal Smart City

#	Details	FY 2016-17 (in Crores) (i)	FY 2017-18 (in Crores) (ii)	FY 2018-19 (in Crores) (iii)	Average Turnover [(iv)+(v)+(vi)/3]
	Turnover- Consortium Member 3(if any)				

Contact Details of officials for future correspondence regarding the bid process:

Details	Authorized Signatory	Secondary Contact
Name		
Title		
Company Address		
Mobile		
Fax		
Email Id		

I further certify that I am competent officer in my company to make this declaration.

Yours Sincerely,

Signature of Authorized Signatory (with official seal)

Name :

Designation :

Address :

Telephone& Fax :

E-mail address :

7.2.7 Auditor's Certificate for turnover for bidder/each member of Consortium

<<To be submitted by each member company in case of Consortium on company's letterhead>>

Date: dd/mm/yyyy

To

Chief Executive Officer (CEO),
Bhopal Smart City Development Corporation Limited,
Zone 14, near Tatpar petrol pump, BHEL
Govindpura, Bhopal
Madhya Pradesh- 462023

Sir/Madam,

This is to certify that the Annual Turnover as per books and records of _____ for the following financial years are as under.

NOTE: To be filed for each Member company in case of a consortium

S.No.	Financial Year ending	Annual Turnover (Rs in Crores)
1.	31 st March, 2017	
2.	31 st March, 2018	
3.	31 st March, 2019	
Average Turnover		

I further certify that I am competent officer in my company to make this declaration.

Yours Sincerely,

Signature of Auditor (with official seal)

Name :
Designation :
Address :
Telephone& Fax :
E-mail address :

7.2.8 Format for Self-declaration by Bidder for not being Blacklisted

[ON BIDDERS LETTERHEAD]

To

CEO

Bhopal Smart City Development Corporation Limited

Date: DD/MM/YYYY

Sub:Declaration of no valid ineligibility for corrupt or fraudulent practices or blacklisted by Government (Central or State)/Semi-Govt. or PSUAs on 31-03-2019.

Ref:Selection of System Integrator for Information and Communication Technology (ICT) Upgradation and Enablement of Fire Services in Bhopal Smart City (RFP No: _____ Dated: __/__/____)

Dear Sir,

In response to the above mentioned RFP I, _____, as _____ <Designation> _____ of M/s _____, hereby declare that our Company / Firm _____ has not been declared blacklisted or ineligible to participate for bidding by any State/Central Govt., Semi-Govt or PSU in last years from the date of submission of bid.

Date:

Signature of Authorized Representative

Name of SI:

Full Address:

Telephone No.:

7.2.9 Format for Authorization by OEM to provide services based on their products

(Please provide separate letter for each OEM)

[ON OEM's LETTERHEAD]

To
CEO
Bhopal Smart City Development Corporation Limited

Date: DD/MM/YYYY

Sub: Authorization of <<Name of the Bidder >> to provide services based on our product(s)

Ref: Selection of System Integrator for Information and Communication Technology (ICT) Upgradation and Enablement of Fire Services in Bhopal Smart City (RFP No: _____ Dated: __/__/____)

Dear Sir,

I, hereby, declare that <<Name of the OEM>>am the Original Equipment Manufacturer in respect to the product (s) proposed in the RFP. I confirm that <Name of the Bidder> has due authorization from us to provide product(s) listed below and related services of warranty, licensing and maintenance, to BSCDCL, as per your RFP (Ref. No. dated).

Having read, examined, and understood the RFP, the receipt of which is hereby duly acknowledged, we, the undersigned, offer to product and services as required and outlined in the RFP. I agree for unconditional acceptance of all the terms and conditions set out in the RFP document.

I endorse the terms and conditions specified in the RFP, contracting and licensing terms provided by <Name of the Bidder> to BSCDCL. I declare that the proposed products shall not become "end of life or end of sale" for next 3 years beginning from the date of installation. Also the support including spares, patches for the quoted products shall be available for next 5 years beginning from the date of installation.

I endorse to provide direct technical support to the BSCDCL for the contract period even in absence of the <Name of the Bidder> providing services to the BSCDCL. The warranty shall be onsite replaceable warranty of the products that are listed below. I also certify that the below mentioned product being supplied by the <Name of the Bidder> meets the minimum specifications given in the RFP.

#	Name of Product (s)	Remarks (if any)
1		
2		

Date:

Signature of Authorized Representative

Name of SI:

Full Address:

Telephone No.:

7.2.10 Format for Statement of No Deviation from the RFP

[ON BIDDERS LETTERHEAD]

To,

CEO

Bhopal Smart City Development Corporation Limited

Date: DD/MM/YYYY

Sub: Undertaking of no deviation from RFP terms and condition

Ref: Selection of System Integrator for Information and Communication Technology (ICT) Upgradation and Enablement of Fire Services in Bhopal Smart City (RFP No: _____ Dated: __/__/____)

Dear Sir,

This is to confirm that the proposal submitted by <<Bidder name>>, is in complete agreement with the RFP and the corrigendum(s) issued thereof and there is no deviation what so ever.

Date:

Signature of Authorized Representative

Name of SI:

Full Address:

Telephone No.:

7.3 Formats for the Technical Bid

7.3.1 General Instructions for Preparation of the Technical Proposal

- i. Bidders have to submit a very structured and organized technical bid, which will be analysed by the Technical Evaluation Committee for different compliances with regards to the requirements of the project. The document submitted must be searchable and well indexed without any handwritten material. Since the cut-off marks for Technical bid Score is 70, the quality and completeness of the information submitted by the bidder will matter a lot. All the documents must be submitted in one file only.
- ii. Bidder is expected to divide its bid in following sections/documents:

a. Bidder's Competence to Execute the Project

This document should bring about the capability of the firm to execute this project. Some of the required documents are as follows:

- Financial capability of the bidder in required formats and supporting documents
- Experience of executing similar projects

b. Technical Proposal

The technical proposal should specify the following:

- Understanding of the project
- Clear articulation and description of the design and technical solution and various components including (infrastructure architecture, application architecture, data architecture and physical street layer architecture)
- Details of the application software proposed
- Integration approach with existing infrastructure
- Reasoning for selection of the proposed technology over other options
- Strength of the bidder to provide services including examples or case-studies of similar solutions deployed for other clients
- Clearly articulate the strategy and approach & methodology for design, installation, configuration and maintenance of project components, data recovery and hosting infrastructure of the project.
- Approach and Methodology for management of SLA requirements specified in the bid. Bidder is required to clearly articulate how the SLA requirements would be adhered.
- Detailed Project Plan with timelines, resource allocation, milestones etc. for supply, installation and commissioning of the various project components.
- The Operations and Risk Mitigation plan.

c. Other Details

- **Bill of Material &BoQ:** The bidder should give details of all the proposed IT and Non-IT components, without specifying the costs in the format given below. Please note that the bid shall get disqualified if Bidder gives price details in the technical document.

#	Name of Item	OEM/Make	Exact Model	Part No.	Quantity/ License Count Offered
1.	<Item 1>				
2.	<Item 2>				
3.	<Item 3>				
4.	<Item 4>				

- Make and Model (one & only one unique Make and Model per BOQ item is required) of all IT as well as Non-IT components along with datasheets highlighting Technical Specification parameters in each datasheet for compliances.
- Compliance to Technical and Functional specifications against each specification feature.
- CVs of the Key Manpower proposed.

d. OEM Details

- OEMs of all proposed equipment/components should have existence in India for last two years as on 31 March 2019.
- During the PoC/Pilot/Demonstration at technical evaluation stage, the Technical Committee will give special attention to verify the quality, robustness and appropriateness of the proposed equipment/components for city conditions. If any brand/product is found unsuitable, bidder may get disqualified or may be asked to replace the product with better brands meeting the tender requirements. Without any cost implication or change s in commercial bid.

e. Proposed Team for the Project

- As specified in Technical Bid Evaluation Framework, BSCDCL would give importance to the right people proposed for the project. Bidder may propose different people for different skill-sets required and different responsibilities (during project implementation and post-implementation). Following documentation is expected in this section:
 - (a) Overall project team (for both Implementation and Post Implementation support phases)
 - (b) Escalation chart for the entire project duration
 - (c) Summary table providing qualification, experiences, certifications and other relevant details
 - (d) Detail CVs in the format attached
- All above mentioned documents shall have an index page with page numbers specified for all the key information/headers on company’s cover letter.
- During the demo at technical evaluation stage, the Technical Committee will give special attention to verify the quality, robustness and appropriateness of the proposed equipment/components for city

7.3.2 Documents Checklist for Technical Bid

#	Documents to be submitted	Submitted (Y / N)	(Page No.)
1.	Bidder competence related docs (Form TQ_1)		
2.	Details of projects executed (Form TQ_2 and TQ_3)		
3.	Understanding of the project		
4.	Description of the design and technical solution and various components including (infrastructure architecture, application architecture, data architecture and physical street layer architecture)		
5.	Details of the application software proposed		
6.	Integration approach with existing infrastructure		
7.	Reasoning for selection of the proposed technology over other options		
8.	Strength of the bidder to provide services including examples or case-studies of similar solutions deployed for other clients		
9.	Approach and methodology for design, installation, configuration and maintenance of hosted components, data recovery, hosting infrastructure of the project		
10.	Approach and methodology for management of SLA requirements specified in the bid. Bidder is required to clearly articulate how the SLA requirements would be adhered.		
11.	Detailed project plan with timelines, resource allocation, milestones etc. for supply, installation and commissioning of the various project components		
12.	Internet bandwidth requirement for the operations		
13.	Risk mitigation plan		
14.	Technically qualified full-time professionals (Form TQ_4)		
15.	Manpower deployed on the project (Form TQ_5)		

#	Documents to be submitted	Submitted (Y / N)	(Page No.)
16.	CVs of the manpower proposed (Form TQ_6)		
17.	Make and model of all IT as well as Non-IT components		
18.	Compliance to Technical & Functional specifications as mentioned		
19.	Bill of material without prices		
20.	Datasheets highlighting the Technical specification parameters in each datasheet for compliances		
21.	Authorization letter from OEMs (Form TQ_7)		

7.3.3 TQ_1: Lead Bidder’s and Consortium Partner’s Turnover Details and Net Worth

<<To be printed on Lead Bidder Company’s Letterhead and signed by Authorized Signatory>>

Date: DD/MM/YYYY

To,
CEO
Bhopal Smart City Development Corporation Limited

Subject: “Selection of System Integrator for Information and Communication Technology (ICT) Upgradation and Enablement of Fire Services in Bhopal Smart City (RFP No: _____ Dated: __/__/____)”.

Dear Sir,

I have carefully gone through the Terms & Conditions contained in the RFP document for “Selection of System Integrator for Information and Communication Technology (ICT) Upgradation and Enablement of Fire Services in Bhopal Smart City (RFP No: _____ Dated: __/__/____)”. I hereby declare that below are the details regarding Overall Annual Turnover and Net Worth of our organization and consortium partner for last 3 financial years (FY 2016-17, 2017-18 and 2018-19).

#	Details	FY	FY	FY	Average
		2016-17 (i)	2017-18 (ii)	2018-19 (iii)	[(i)+(ii)+(iii)3]
(in INR Crores)					
1.	Lead Bidder	Overall Turnover	Annual		
		Turnover from systems installation, integration/software development & maintenance business, ICT projects in the last three years (# as defined in PQ)			
		Net Worth			
2.	Consortium Partner	Overall Turnover	Annual		
		Turnover	from		

#	Details	FY	FY	FY	Average
		2016-17	2017-18	2018-19	[(i)+(ii)+(iii)3]
		(i)	(ii)	(iii)	
(in INR Crores)					
	systems installation, integration/software development & maintenance business, ICT projects in the last three years (# as defined in PQ)				
	Net Worth				

Contact details of officials for future correspondence regarding the bid process:

Details	Authorized Signatory	Secondary Contact
Name		
Title		
Company Address		
Mobile		
Fax		

I further certify that I am competent officer in my company to make this declaration.

Yours sincerely,

Signature of Authorized Signatory (with official seal)

Name :
Designation :
Address :
Telephone & Fax :
E-mail Address :

Note: To be submitted with any other supporting details specified as document proof in Section 7.22.

7.3.4 TQ_2: Experience of implementation in relevant projects as mentioned in Clause 3.2 A2

<<To be printed on Company's Letterhead and signed by Authorized Signatory>>

Date: DD/MM/YYYY

To,
CEO
Bhopal Smart City Development Corporation Limited

Dear Sir,

I have carefully gone through the Terms & Conditions contained in the RFP document for “Selection of System Integrator for Information and Communication Technology (ICT) Upgradation and Enablement of Fire Services in Bhopal Smart City (RFP No: _____ Dated: __/__/____)”. I hereby declare that below are the details regarding relevant work that has been taken up by our company and consortium partner.

NOTE: To be filled separately for each project undertaken by the lead bidder and consortium partner.

Name of the Project	Lead Bidder			
	Project 1	Project 2	Project 3	- Project n
General Information				
Client for which the project was executed				
Name of the client contact person(s)				
Designation of client contact person(s)				
Contact details of the client contact person(s)				
Project Details				
Description of the project				
Scope of work of the bidder				
Deliverables of the bidder				
Technologies used				
Other Details				
Total cost of the project				
(If project is executed as a consortium				

Name of the Project	Lead Bidder				
	Project 1	Project 2	Project 3	-	Project n
member, then provide cost of work done as per scope of work allocation only)					
Duration of the project (number of months, start date, completion date, current status)					
Other relevant information <for each type of the project type>					
Mandatory Supporting Documents					
LoI/work order with full BoQ					
Contract agreement					
Copy of invoice submitted to the client					
Client certificate giving present status of the project and view of the quality of services by the bidder					

Name of the Project	Consortium Partner				
	Project 1	Project 2	Project 3	-	Project n
General Information					
Client for which the project was executed					
Name of the client contact person(s)					
Designation of client contact person(s)					
Contact details of the client contact person(s)					
Project Details					
Description of the project					
Scope of work of the bidder					
Deliverables of the bidder					
Technologies used					

Name of the Project	Consortium Partner			
	Project 1	Project 2	Project 3	Project n
Outcomes of the project				
Other Details				
Total cost of the project				
(If project is executed as a consortium member, then provide cost of work done as per scope of work allocation only)				
Duration of the project (number of months, start date, completion date, current status)				
Other relevant information <for each type of project>				
Mandatory Supporting Documents				
LoI/work order with full BoQ				
Contract agreement				
Copy of invoice submitted to the client				
Client certificate giving present status of the project and view of the quality of services by the bidder				

I further certify that I am competent officer in my company to make this declaration.

Yours sincerely,

Signature of Authorized Signatory (with official seal)

Name :
 Designation :
 Address :
 Telephone & Fax :
 E-mail Address :

Note: To be submitted with any other supporting details specified as document proof in Section 7.22.

7.3.5 TQ_3: Experience of Implementing Automatic Vehicle Tracking implementation in relevant projects as mentioned in Clause 3.2 A3

- <<To be printed on Company’s Letterhead and signed by Authorized Signatory>>

Date: DD/MM/YYYY

To,
 CEO
 Bhopal Smart City Development Corporation Limited

Dear Sir,

I have carefully gone through the Terms & Conditions contained in the RFP document for **Selection of System Integrator for Information and Communication Technology (ICT) Upgradation and Enablement of Fire Services in Bhopal Smart City (RFP No: _____ Dated: __/__/____)**. I hereby declare that below are the details regarding relevant work that has been taken up by our company and consortium partner.

NOTE: To be filled separately for each project undertaken by the lead bidder and consortium partner.

Name of the Project	Lead Bidder			
	Project 1	Project 2	Project 3	- Project n
General Information				
Client for which the project was executed				
Name of the client contact person(s)				
Designation of client contact person(s)				
Contact details of the client contact person(s)				
Project Details				
Description of the project				
Scope of work of the bidder				
Deliverables of the bidder				
Technologies used				
Outcomes of the project				
Other Details				

Name of the Project	Lead Bidder			
	Project 1	Project 2	Project 3	- Project n
Total cost of the project				
(If project is executed as a consortium member, then provide cost of work done as per scope of work allocation only)				
Duration of the project (number of months, start date, completion date, current status)				
Other relevant information <for each type of project>				
Mandatory Supporting Documents				
LoI/work order with full BoQ				
Contract agreement				
Copy of invoice submitted to the client				
Client certificate giving present status of the project and view of the quality of services by the bidder				

Name of the Project	Consortium Partner			
	Project 1	Project 2	Project 3	- Project n
General Information				
Client for which the project was executed				
Name of the client contact person(s)				
Designation of client contact person(s)				
Contact details of the client contact person(s)				
Project Details				
Description of the project				
Scope of work of the bidder				
Deliverables of the bidder				
Technologies used				
Outcomes of the project				
Other Details				
Total cost of the project				
(If project is executed as a consortium member, then provide cost of work done as per scope of work allocation only)				
Duration of the project (number of months, start date, completion date, current status)				
Other relevant information <for each type of project>				
Mandatory Supporting Documents				
LoI/work order with full BoQ				
Contract agreement				
Copy of invoice submitted to the client				
Client certificate giving present status of the project and view of the quality of services by				

Name of the Project	Consortium Partner			
	Project 1	Project 2	Project 3	- Project n
the bidder				

I further certify that I am competent officer in my company to make this declaration.

Yours sincerely,

Signature of Authorized Signatory (with official seal)

Name :
Designation :
Address :
Telephone & Fax :
E-mail Address :

Note: To be submitted with any other supporting details specified as document proof in Section 7.22.

7.3.6 TQ_4: Undertaking for Technically Qualified Full-time Professionals on Company's Payroll

<<To be printed on Company's Letterhead and signed by Authorized Signatory>>

Date: DD/MM/YYYY

To,
CEO
Bhopal Smart City Development Corporation Limited

Dear Sir,

I have carefully gone through the Terms & Conditions contained in the RFP document for “Selection of System Integrator for Information and Communication Technology (ICT) Upgradation and Enablement of Fire Services in Bhopal Smart City (RFP No: _____ Dated: __/__/____)”. I hereby declare that my company <company's name> has <number > technically qualified professionals as on 31 March 2019.

NOTE: To be filled for the lead bidder and consortium partner.

#	Name of the Resource	Proposed Role	Highest Qualification	Total Experience (in years)	Total Relevant Experience for the Proposed Position (in Years)	Certifications
1.						
2.						
3.						

I further certify that I am competent officer in my company to make this declaration.

Yours sincerely,

Signature of Authorized Signatory (with official seal)

Name :
Designation :
Address :
Telephone & Fax :
E-mail Address :

Note: To be submitted with any other supporting details specified as document proof in Section 7.22.

7.3.7 TQ_5: Undertaking for Manpower Deployed on Project

<<To be printed on Company's Letterhead and signed by Authorized Signatory>>

Date: DD/MM/YYYY

To,
CEO
Bhopal Smart City Development Corporation Limited

Dear Sir,

I have carefully gone through the Terms & Conditions contained in the RFP document for "Selection of System Integrator for Information and Communication Technology (ICT) Upgradation and Enablement of Fire Services in Bhopal Smart City (RFP No: _____ Dated: __/__/____)". I hereby declare that following resources are being proposed for the project.

NOTE: To be filled separately by the lead bidder and consortium partner.

#	Proposed Position	Resource Name	Proposed CV Compliance
1.			
2.			
3.			
4.			
5.			

I further certify that I am competent officer in my company to make this declaration.

Yours sincerely,

Signature of Authorized Signatory (with official seal)

Name :
Designation :
Address :
Telephone & Fax :
E-mail Address :

Note: To be submitted with any other supporting details specified as document proof in Section 7.22.

If this declaration is found to be incorrect then without prejudice to any other action that may be taken, my/ our security may be forfeited in full and the tender if any to the extent accepted may be cancelled.

Yours sincerely,

Signature of Authorized Signatory (with official seal)

Name

:

Designation

:

Address

:

Date

:

Place

:

Seal of the Organization

:

7.3.8 TQ_6: CVs of the Manpower Proposed

- <<CV of the proposed Manpower to be submitted in the following format>>

1.	Name of the Staff																			
2.	Current Designation in the Organization																			
3.	Proposed Role in the Project																			
4.	Proposed Responsibilities in the Project																			
5.	Date of Birth																			
6.	Education	<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr style="background-color: black; color: white;"> <th style="width:30%;">Degree/Diploma</th> <th style="width:30%;">College/University</th> <th style="width:20%;">Year of Passing</th> <th style="width:20%;"></th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>			Degree/Diploma	College/University	Year of Passing													
Degree/Diploma	College/University	Year of Passing																		
7.	Key Training and Certifications																			
8.	Language Proficiency	<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr style="background-color: black; color: white;"> <th style="width:25%;">Language</th> <th style="width:20%;">Reading</th> <th style="width:20%;">Writing</th> <th style="width:35%;">Speaking</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>			Language	Reading	Writing	Speaking												
Language	Reading	Writing	Speaking																	
9.	Employment Record (For the Total Relevant Experience)	<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr style="background-color: black; color: white;"> <th style="width:25%;">From /To</th> <th style="width:30%;">Employer</th> <th style="width:45%;">Position Held</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </tbody> </table>			From /To	Employer	Position Held													
From /To	Employer	Position Held																		
10.	Total No. of Years of Work Experience																			

11. Total No. of Years of Experience for the Role Proposed

12. Highlights of Relevant Assignments Handled and Significant Accomplishments

Use following format for each project

Name of Assignment/Project:	
Year:	
Location:	
Client:	
Main Project Features:	
Positions Held:	
Activities Performed:	

7.3.9 TQ_7: Format for Authorization Letters from OEMs

<<To be printed on OEM's Letterhead and signed by Authorized Signatory of OEM>>

Date: DD/MM/YYYY

To,

CEO

Bhopal Smart City Development Corporation Limited

Subject: "Selection of System Integrator for Information and Communication Technology (ICT) Upgradation and Enablement of Fire Services in Bhopal Smart City (RFP No: _____ Dated: __/__/____)" – Authorization Letter from OEMs.

Reference: Tender No: <No> dated <DD/MM/YYYY>

Dear Sir,

We _____, (name and address of the manufacturer) who are established and reputed manufacturers of _____ having factories at _____ (addresses of manufacturing/development locations) do hereby authorize M/s _____ (name and address of the bidder) to bid, negotiate and conclude the contract with you against the above mentioned tender for the above equipment/software manufactured/developed by us.

We herewith certify that the above mentioned equipment/software products are not end of the life and we hereby undertake to support them for the duration of minimum 6 years from the date of this letter.

This authorisation letter shall be valid till the bid validity period defined in the RFP.

Yours faithfully,

(Signature of the Authorized Signatory of OEM)

Name:

Designation:

Seal:

(Signature of the Authorized Signatory of Lead Bidder)

Name:

Designation:

Seal:

Date:

Date:

Place:

Place:

Business Address:

Business Address:

7.4 Financial Bid Format and instructions

7.4.1 General Instructions

- a) Bidder should provide all prices as per the prescribed format under this Annexure.
- b) All the prices are to be entered in Indian Rupees (INR) only.
- c) Prices indicated in the schedules shall be inclusive of all taxes, duties and levies etc. The prices should also specify five year support cost as per provided formats.
- d) It is mandatory to provide breakup of all taxes, duties and levies wherever asked for.
- e) BSCDCL reserves the right to ask the successful bidder to submit proof of payment against any of the taxes, duties and levies indicated.
- f) BSCDCL shall take into account all taxes, duties and levies for the purpose of evaluation.
- g) The bidders need to account for all Out of Pocket expenses due to boarding, lodging and other related items.
- h) Variation in quantities of individual items shall be permitted. The successful bidder shall not object to the upward or downward variation in quantities of any item within the variation limits.
- i) Bidder shall be bound to give same or more % of discount on the list price of the OEMs on the future purchases (additional purchases within the contract period) by BSCDCL. Bidder shall ensure that the future products supplied are of latest specifications as per the OEM roadmap.
- j) For the purpose of evaluation of Commercial Bids, BSCDCL shall make appropriate assumptions to arrive at a common Bid Price for all the bidders. This however shall have no correlation with the Contract value or actual payment to be made to the bidder.
- k) BSCDCL also intends to utilize various rates obtained through this tender for requirements across various departments. Bidders are requested to factor this larger demand and give the best possible rate to BSCDCL.
- l) SI should details on the functional requirements of the system and the benchmark specifications for the items mentioned in the Commercial Formats.
- m) No escalations of prices will be considered under any circumstances.
- n) The software licenses provided should be perpetual and at enterprise level such that BSCDCL can use the software products irrespective of number of users and number of field devices or number of cores of computer. Additions to users or field devices or number of cores will have to be done at no additional cost.

**** Bidder are requested to visit the site and do the preliminary survey before quoting the bid.**

7.4.2 Commercial Bid Cover Letter

Date: dd/mm/yyyy

To

CEO

Bhopal Smart City Development Corporation Limited

Sub : Selection of System Integrator for Information and Communication Technology (ICT) Upgradation and Enablement of Fire Services in Bhopal Smart City (RFP No: _____)
Dated: __/__/____)

Dear Sir,

We, the undersigned Bidders, having read and examined in detail all the bidding documents in respect of "_____ - **for BSCDCL**" do hereby propose to provide services as specified in the bid referred above.

1. PRICE AND VALIDITY

- All the prices mentioned in our bid are in accordance with the terms as specified in the bid documents. All the prices and other terms and conditions of this bid are valid for a period of 180 calendar days from the date of opening of the Bids.
- We hereby confirm that our bid prices include all taxes. Taxes are quoted separately under relevant sections, as specified in the bid formats.
- We have studied the clause relating to Indian Income Tax and hereby declare that if any income tax, surcharge on Income Tax, Professional and any other Corporate Tax in altered under the law, we shall pay the same.

2. UNIT RATES

We have indicated in the relevant schedules enclosed, the unit rates for the purpose of payment as well as for price adjustment in case of any increase to / decrease from the scope of work under the contract.

3. DEVIATIONS

We declare that all the services shall be performed strictly in accordance with the bid documents and there are no deviations.

4. QUALIFYING DATA

We confirm having submitted the information as required by you in your Instruction to Bidders. In case you require any other further information/documentary proof in this regard before evaluation of our bid, we agree to furnish the same in time to your satisfaction.

5. BID PRICE

We declare that our Bid Price is for the entire scope of the work as specified in the bid document. These prices are indicated in the subsequent sub-sections of this Section.

6. CONTRACT PERFORMANCE GUARANTEE BOND

We hereby declare that in case the contract is awarded to us, we shall submit the contract Performance Bank Guarantee in the form prescribed in the bid.

We hereby declare that our bid is made in good faith, without collusion or fraud and the information contained in the bid is true and correct to the best of our knowledge and belief.

We understand that our bid is binding on us and that you are not bound to accept a bid you receive. We confirm that no Technical deviations are attached here with this commercial offer.

Thanking you,

Yours faithfully,

(Signature of the Authorised Signatory)

Name

Designation

Seal.

Date:

Place:

Business Address:

7.4.3 Commercial Bid Format and Instructions

The Bidder has to quote the rate in the BoQ Spreadsheet available online with this bid. Details to be filled up for price bid are as below. There will be ±20% variance in the quantity mentioned in the RFP and BSCDL reserves the right to change the BOQ, if required. All bidders have to quote only the lump-sum cost as per the summary of commercial format in the e-tendering site. The lump-sum cost need to be calculated as defined by the reference tables. The fees shall be inclusive of all taxes and charges as applicable under the relevant Laws of India. Should there be a change in applicable taxes, the actual taxes on the date of billing would prevail.

7.4.3.1 Summary

Sr. No.	Reference	Line Item	Total Price
1	Schedule A	Fire Control Station Equipment with Installation and Commissioning	
2	Schedule B	Fire Tender and Other Vehicle Equipment	
4	Schedule C	Application Development and Configuration	
5	Schedule D	Fire Audit compliance before Go Live	
6	Schedule E	Training	
7	Schedule F	Bandwidth for 3 Years	
8	Schedule G	Manpower for 3 Years	
9	Schedule H	Comprehensive CMC for 3 years	
		Total	
		GST@18%	
		Grant Total	

7.4.3.2 Schedule A: Fire Control Station Equipment (with Fategarh as the Central Control Station) with Installation and Commissioning

Sr.	Item Description	QTY	Units (Z)	Unit Rate (Y)	Total Rate (Z*Y)
				(INR)	(INR)
1	Video Wall Cubes (2*2 Matrix LED)	2	Nos.		

RFP – Selection of System Integrator for Information and Communication Technology (ICT) Upgradation and Enablement of Fire Services in Bhopal Smart City

Sr.	Item Description	QTY	Units (Z)	Unit Rate (Y) (INR)	Total Rate (Z*Y) (INR)
2	Audio Mixer and Speaker System (One set for each fire station)	11	Nos		
3	Networking	11	Locations		
4	Operating Workstation– 3 Monitor per station	13	Nos		
5	IP Phones	13	Nos		
6	UPS with battery backup of 1 Hours (1 set for each fire station)	13	Nos		
7	Access Control System (1 set for each fire station)	11	Nos		
8	Electrical and Power Cabling (1 set for each fire station)	11	Lump sum		
9	LAN and CAT 6 Cabling (1 set for each fire station)	11	Lump sum		
11	Public Address System (1 set for each fire station)	11	Number		
12	Fixed Dome Camera (Set for covering interior and exterior of the fire stations)	55	Number		
13	Furniture for the operators desk at CFCS and FCS (3 at CFCS and 10 at FCS and 2 for technical support team)	15	Sets		
14	L2 Switches	11	Number		
15	Routers	12	Number		

Sr.	Item Description	QTY	Units (Z)	Unit Rate (Y) (INR)	Total Rate (Z*Y) (INR)
16	IP PBX System	1	Number		
17	ISDN PRI License	1	Number		
18	Dialler	1	Number		
19	Headset	13	Number		
20	Passive Infrastructure	1	Lump sum		
21	Civil Works	1	Lump sum		
22	Server	1	Number		
23	Rack	1	Number		
24	Firewall	1	Number		
25	L3 Switch for Server	1	Number		
26	Any Other Item (Please mention the components as separate BoQ line items)	1	Lump sum/ Number		
Total – Schedule A (in INR)					
Total (in Words)					

7.4.3.3 Schedule B: Fire Tender and Other Vehicle Equipment

Sr.	Item Description	Quantity	Units (Z)	Unit Rate (Y) (INR)	Total Rate (Z*Y) (INR)
1.	Mobile Data Terminal for Fire Tenders	45	Nos.		
2.	Mobile NVR	45	Nos.		

Sr.	Item Description	Quantity	Units (Z)	Unit Rate (Y) (INR)	Total Rate (Z*Y) (INR)
3.	Fix Mini dome Camera for Fire Tender	45	Nos.		
4.	3G/4G Router in Fire Tender	45	Nos.		
5.	GPS Device for Vehicles	17	Nos.		
6.	Water Level Sensors	45	Nos.		
7.	Fuel Level Sensor	45	Nos.		
8.	Any Other Item	1	Lump-sum		
Total – Schedule B (in INR)					
Total (in Words)					

7.4.3.4 Schedule C: Application Development and Configuration

Sr.	Item Description	Quantity	Units (Z)	Unit Rate (Y) (INR)	Total Rate (Z*Y) (INR)
1	Call Centre Fire Management Application Cost including Computer Aided Call takers and Dispatch Software	10	Nos.		
2	Video Management System	1	Nos.		
3	VTMS (inclusive of integration with the existing system),EMS	1	Nos.		
4	Integration Costs	1	Lumpsum		
5	Any other Item	1	Lump-sum		
Total – Schedule C (in INR)					
Total (in Words)					

7.4.3.5 Schedule D: Fire Audit compliance before Go Live

Item Description	QTY	Units (Z)	Unit Rate (Y) (INR)	Total Rate (Z*Y) (INR)
1 Third Party IT and Fire Preparedness Audit for the City	1	Lump-sum		
Total – Schedule D (in INR)				
Total (in Words)				

7.4.3.6 Schedule E: Training

Sr.	Item Description	QTY	Units (Z)	Unit Rate (Y) (INR)	Total Rate (Z*Y) (INR)
1	Training	12	Batches (20 people each)		
Total – Schedule E (in INR)					
Total (in Words)					

7.4.3.7 Schedule F: Bandwidth Cost

Sr	Component	Quantity	Units	Unit Rate	Total Rate Per Month	Year1	Year2	Year3
1.	Sim Card Monthly Charges (For Textual Data) 5 years	45	Lump-sum					
2.	Sim Card Monthly Charges (For Cameras) 5 years	45	Lump-sum					
3.	Bandwidth Cost - Rate Per Month (10 Mbps Lease line Connectivity between ICC, CFCS, FCS)	1	Lump-sum					

Sr	Component	Quantity	Units	Unit Rate	Total Rate Per Month	Year1	Year2	Year3
Total – Schedule F (in INR)								
Total (in Words)								

7.4.3.8 Schedule G: Manpower Cost

Sr.	Item Description	Qty.	Units (Z)	Estimated Units Price Per Year	Total 1st Year Rate (INR)	Total 2 nd Year Rate (INR)	Total 3 rd Year Rate (INR)
1.	Project Manager year 1	1	Lump-sum				
2.	Field Support Engineer	2	Lump-sum				
3.	Any Other Item	1	Lump-sum				
Total – Schedule G (in INR)							
Total (in Words)							

7.4.3.9 Summary H: Comprehensive Maintenance Cost

Sr.	Item Description	QTY	Units (Z)	Year1	Year 2	Year 3
1	CMC of IT and Non-IT Components for 3 years	1	Lumpsum			
Total – Schedule H (in INR)						
Total (in Words)						

7.5 Format for Performance Bank Guarantee

[On Appropriate Stamp Paper]

Bank Guarantee No. _____

THIS DEED OF GUARANTEE is executed on this [insert date] day of [insert month and year] at [insert place] by [insert name of bank] with its head/registered office at [insert address], (hereinafter referred

to as the Guarantor, which expression shall unless it is repugnant to the subject or context thereof include successors and assigns)

IN FAVOUR OF:

BHOPAL SMART CITY DEVELOPMENT CORPORATION LIMITED, a company incorporated under the (Indian) Companies

Act, 2013, with its registered office at _____ (hereinafter referred to as BSCDCL, which expression shall, unless it be repugnant to the context or meaning thereof, include its successors-in-title and permitted assigns);

WHEREAS:

- A. BSCDCL has entered into a contract for providing Implementation services dated [insert date] (the **Contract**) with [insert name of Implementing Agency], a company/firm [incorporated/registered] under the [insert name of the relevant statute under which the Implementing Agency has been incorporated or registered, as the case may be], [with its [registered/principal] office at [_____]] (hereinafter referred to as the **Implementing Agency**, which expression shall, unless it be repugnant to the context or meaning thereof, include its successors-in-title and permitted assigns).
- B. In terms of the Contract, the Implementing Agency has agreed to provide the supply, installation, commissioning and maintenance of E-Vehicles which involve the use of technology, information and data to improve Waste Management services within the city of Bhopal, to implement the Smart Cities Mission in Bhopal, pursuant to the Request for Proposal dated [_____] (referred to as the **RFP**) and other related documents including without limitation the draft Contract (collectively referred to as **Bid Documents**).
- C. In terms of the letter of award (the LOA) dated [insert date] issued by Client to the Implementing Agency and **Clause I** of the Contract, the Implementing Agency is required to furnish to BSCDCL, an unconditional, irrevocable, on demand bank guarantee for an amount equivalent to Rs. [_____] [Insert amount equivalent to 10% of the Total Value of Contract] (the Guaranteed Amount) as security for the due and punctual performance or discharge of the Implementing Agency's obligations and liabilities under the Contract.
- D. At the request of the Implementing Agency and for sufficient consideration, the Guarantor has agreed to provide an unconditional, irrevocable and on-demand bank guarantee, for the due and punctual performance or discharge by the Implementing Agency of its obligations and liabilities under the Contract.

NOW THEREFORE THIS DEED WITNESSETH AS FOLLOWS:

1. Capitalized terms used herein but not defined shall have the meaning ascribed to them in the Contract.
2. The Guarantor hereby irrevocably and unconditionally guarantees and secures, as primary obligor and not merely as guarantor, to BSCDCL the payment in full of all amounts at any time that may be due, owing or payable to BSCDCL from the Implementing Agency for the failure of the Implementing Agency to duly and punctually perform all of its obligations under the Contract during the term (**Guarantee**), without any demur, reservation, protest or recourse, immediately on receipt of a demand from BSCDCL.

The Guarantee is given on consideration received from the Implementing Agency (the receipt and sufficiency of which is hereby acknowledged).

The Guarantor agrees that the value of the Guarantee shall at all times be maintained at the amount equivalent to the Guaranteed Amount.

The Guarantor further agrees that this Guarantee does not limit the number of claims that may be made by BSCDCL against the Guarantor. Upon a payment being made under this Guarantee, the amount of the Guarantee shall automatically be replenished to the full Guaranteed Amount.

Any payment made hereunder shall be made free and clear of and without deduction for, or on account of, any present or future Taxes, deductions or withholdings of any nature whatsoever and by whomsoever imposed, and where any withholding on a payment is required by any Applicable Law, the Guarantor shall comply with such withholding obligations and shall pay such additional amount in respect of such payment such that BSCDCL receives the full amount due hereunder as if no such withholding had occurred.

3. The Guarantor shall not go into the veracity of any breach or failure on the part of the Implementing Agency or validity of demand so made by BSCDCL and shall pay the amount specified in the demand notwithstanding any direction to the contrary given or any dispute whatsoever raised by the Implementing Agency or any other Person. The Guarantor's obligations hereunder shall subsist until all such demands are duly met and discharged in accordance with the provision hereof.
4. The obligations of the Guarantor herein are absolute and unconditional, irrespective of the value, genuineness, validity, regularity or enforceability of the Contract or the insolvency, bankruptcy, re-organization, dissolution or liquidation of the Implementing Agency or any change in ownership of the Implementing Agency or any purported assignment by the Implementing Agency or any other circumstance whatsoever, which might otherwise constitute a discharge or defense of a guarantor or a surety.

Further, this Guarantee is in no way conditional upon any requirement that BSCDCL shall first attempt to procure the Guaranteed Amount from the Implementing Agency or any other Person, or resort to any other means of obtaining payment of the Guaranteed Amount.

5. In order to give effect to this Guarantee, BSCDCL shall be entitled to treat the Guarantor as the principal debtor. The obligations of the Guarantor under this Guarantee shall not be affected by any act, omission, matter or thing which, but for this provision, would reduce, release or prejudice the Guarantor from any part of the Guaranteed Amount or prejudice or diminish the Guaranteed Amount in whole or in part, including, whether or not known to it, or BSCDCL:
 - a. any time or waiver granted to, or composition with, the Implementing Agency or any other Person;
 - b. any incapacity or lack of powers, authority or legal personality of or dissolution or change in the status of the Implementing Agency or any other Person;
 - c. any variation of the Contract so that references to the Contract in this Guarantee shall include each variation;
 - d. any unenforceability, illegality or invalidity of any obligation of any Person under the Contract or any unenforceability, illegality or invalidity of the obligations of the Guarantor under this Guarantee or the unenforceability, illegality or invalidity of the obligations of any Person under any other document or Guarantee, to the extent that each obligation under this Guarantee shall remain in full force as a separate, continuing and primary obligation, and its obligations be construed accordingly, as if there was no unenforceability, illegality or invalidity;

- e. the partial or entire release of any Guarantor or other Person primarily or secondarily liable or responsible for the performance, payment or observance of any of the Implementing Agency 's obligations during the term of the Contract; or by any extension, waiver, or amendment whatsoever which may release a guarantor or the Guarantor, other than performance or indefeasible payment of the Guaranteed Amount; or
- f. any part performance of the Contract by the Implementing Agency or by any failure by BSCDCL to timely pay or perform any of its obligations under the Contract.
- 6. If, and to the extent that for any reason the Implementing Agency enters or threatens to enter into any proceedings in bankruptcy or re-organization or otherwise, or if, for any other reason whatsoever, the performance or payment by the Implementing Agency of the Guaranteed Amount becomes or may reasonably be expected to become impossible, then the Guaranteed Amount shall be promptly paid by the Guarantor to BSCDCL on demand.
- 7. So long as any amount is due from the Implementing Agency to BSCDCL, the Guarantor shall not exercise any right of subrogation or any other rights of a guarantor or enforce any guarantee or other right or claim against the Implementing Agency, whether in respect of its liability under this Guarantee or otherwise, or claim in the insolvency or liquidation of the Implementing Agency or any such other Person in competition with BSCDCL. If the Guarantor receives any payment or benefit in breach of this clause 7, it shall hold the same upon trust for BSCDCL.
- 8. This Guarantee shall remain in full force and effect from the date hereof until 60 days beyond issuance of the Completion Certificate.

Notwithstanding the foregoing, this Guarantee shall continue in effect until the sums payable under this Guarantee have been indefeasibly paid in full and the Guarantor receives written notice thereof from BSCDCL, such notice to be issued promptly upon such occurrence.

- 9. The Guarantor represents and warrants to BSCDCL that:
 - a. it has the power to execute, deliver and perform the terms and provisions of this Guarantee and has taken all necessary action to authorised the execution, delivery and performance by it of this Guarantee;
 - b. the Guarantor has duly executed and delivered this Guarantee, and this Guarantee constitutes its legal, valid and binding obligation enforceable in accordance with its terms except as the enforceability thereof may be limited by applicable bankruptcy, insolvency, moratorium or other similar laws affecting the enforcement of creditors' rights generally and by general equitable principles;
 - c. neither the execution, delivery or performance by the Guarantor of this Guarantee, nor compliance by it with the terms and provisions hereof will: (i) contravene any material provision of any Applicable Law; (ii) conflict or be inconsistent with or result in any breach of any of the material terms, covenants, conditions or provisions of, or constitute a default under any agreement, contract or instrument to which the Guarantor is a party or by which it or any of its property or assets is bound; or (iii) violate any provision of the Guarantor's constituent documents;
 - d. no order, consent, approval, license, authorization or validation of, or filing, recording or registration with, except as have been obtained or made prior to the date hereof, or exemption by, any governmental or public body or authority, or any subdivision thereof, is required to authorize, or is required in connection with: (i) the execution, delivery and performance of this Guarantee; or (ii) the legality, validity, binding effect or enforceability of this Guarantee; and

- e. this Guarantee will be enforceable when presented for payment to the Guarantor's branch in Bhopal at [_____].
10. This Guarantee is a continuing one and all liabilities to which it applies or may apply under the terms hereof shall be conclusively presumed to have been created in reliance hereon. No failure or delay on the part of BSCDCL in exercising any right, power or privilege hereunder and no course of dealing between BSCDCL and the Guarantor, or the Implementing Agency, shall operate as a waiver thereof, nor shall any single or partial exercise of any right, power or privilege hereunder preclude any other or further exercise thereof or the exercise of any other right, power or privilege.
11. The rights, powers and remedies expressly provided in this Guarantee are cumulative and not exclusive of any rights, powers or remedies which BSCDCL would otherwise have. No notice to or demand on the Guarantor in any case shall entitle the Guarantor to any other further notice or demand in similar or other circumstances or constitute a waiver of the rights of BSCDCL to any other or further action in any circumstances without notice or demand.
12. If any one or more of the provisions contained in this Guarantee are or become invalid, illegal or unenforceable in any respect, the validity, legality and enforceability of the remaining provisions shall not in any way be affected or impaired thereby, and the Guarantor shall enter into good faith negotiations with BSCDCL to replace the invalid, illegal or unenforceable provision.
13. The Guarantor hereby agrees to execute and deliver all such instruments and take all such actions as may be necessary to make effective fully the purposes of this Guarantee.
14. This Guarantee may be executed in one or more duplicate counterparts, and when executed and delivered by the Guarantor and BSCDCL shall constitute a single binding agreement.
15. BSCDCL may assign or transfer all or any part of its interest herein to any other person with prior written notice to the Guarantor. The Guarantor shall not assign or transfer any of its rights or obligations under this Guarantee.
16. All documents arising out of or in connection with this Guarantee shall be served:
a. upon BSCDCL, at [insert address]; and
b. upon the Guarantor, at [insert address].
17. Any demand, notice or communication would have been deemed to have been duly served:
a. if delivered by hand, when left at the proper address of services; and
b. if given or made by pre-paid registered post or facsimile, when received.
18. Either party may change the above address by prior written notice to the other party.
19. This Guarantee shall be governed by, and construed in accordance with, the laws of India. The Guarantor irrevocably agrees that any dispute arising out of or relating to this Guarantee may be brought in the courts in Madhya Pradesh.

IN WITNESS WHEREOF the Guarantor has set its hands hereunto on the day, month and year first hereinabove written.

Signed and delivered by [**insert name of Bank**] Bank, by [**insert name of branch**] Branch by hand

Of [**insert name of signatory**]

It's [**insert designation**] and duly authorized representative

Authorized by [Power of Attorney dated [**insert date**]] OR [Board resolution dated [**insert date**]].

8 Annexure VIII: Software Functional Requirements

8.1 Call Centre Fire Management Application including Computer Aided Dispatch Software

The application should be able to handle 100 concurrent users simultaneously. The load test for the application to be done during the acceptance testing.

Sl No	Requirement	Minimum Requirement Description
1	All Communication Channel / Multiagency support	The CAD software should be capable to receive call (Mobile, Landline),SMS, chat, email, social media like Facebook, Twitter, panic button and mobile apps to create an appropriate case and send the relevant case to the Dispatch Officer after case assessment. The software should have capability to support multiple agencies like Police-100, Fire-101, and Medical-108 and others. The software should be able to integrate the calls for Service from this multi-agencies into the same system and prioritization should be possible
2	Communication Channel- Call	The software should be able to display caller name, caller number and caller address on Call taker desktop. Data from LBS: Automatic display of data on CAD screen Manual Data of the location: Call taker should be capable to enter the location of the caller on CAD Screen
3	Communication Channel-SMS	The software should be able to automatically create a case using SMS data (Phone No.&Message)and display on the Call taker desktop
4	Communication Channel-SMS	The Call taker should be able to assess the SMS case and send the case to Outbound call Call taker Or Dispatch Officer after assessment
5	Communication Channel-IOT	The software should be able to receive the data from Internet of things (IOT) devices like sensors, panic button with location of the user & display on the officer desktop
6	Communication Channel-IOT	The officer should be able to send the case to the Outbound dialler Or Dispatch Officer after assessment
7	Communication Channel - Mobile Application	The CAD software should be integrated with Bhopal Plus App to receive location of the caller and caller number
8	Call Classification	The Call taker should be able to classify the case into distress case, enquiry case, departmental case, administrative, crankcase, outbound call case etc. All such Classifications must be logged in the system and can add more classification at later stage. System will facilitate the Call Taker (CT) to classify and transfer the call to available CT and DO.

Sl No	Requirement	Minimum Requirement Description
9	Call Transfer Or Call Forward	CAD Call taker should be capable to transfer the call to the control room call taker. Call should not be disconnected during call forwarding Or Transferring into the system
10	Duplicate Calls	An incident may attract more than one call but each call is important as it may give details about eye witnesses and other supportive evidence. The system should suggest the possibility of a duplicate call based on the location, time, classification etc. Duplicate calls should be cross referenced for easily retrievable through Grouping
11	Duplicate Calls	It should be possible to merge duplicate calls depending upon the situation. To achieve this, the system should have the capability for cross referencing of Case. Whenever a call is merged, the system should not generate a new dispatch
12	Duplicate Calls	The software should alert the communication Call taker, Dispatch Officer, Supervisor etc. or about the possibility of a single incident - Duplicate call situation
13	Voice Recorder	Integration with Voice recording software provided by Bidder
14	Case Creation	System should facilitate Case creation, by providing' a drop down menu for various functions like creation of an Case, files attachment, location of nearby Case and other information related to an Case should be recorded and updated.
15	Soft Phone Integration	The software should have a capability of a Telephone window allowing Call takers to dial, answer, end a call, keep the call-in busy status, and free a specific call. The functionality should also provide the status of incoming and outgoing calls. Soft phone should have a feature to select the state for call forwarding Or transferring Or conference call.
16	Emergency Call	The software should have capabilities to create Hot Calls like fire in a building, disaster emergency. The Call taker should fill minimum information for a Hot call. Dispatch Officer and Supervisor should receive the alert Or notification for the same. Dispatch Officer should be able to initiate action for quick response. To facilitate quick response to emergency calls orhot call, there should be special and dedicated hot call button in the Call taker software
17	Case Status Display and Search	The Call taker GUI screen must be provided with 'Case Status Window' displaying the status of all Case like 'Pending', 'Open', 'Dispatched', 'Closed' etc. The software should be able to search the Cases using various search option. Like Case status, Case ID, phone no, Date & Time, over the time, Case Type etc.
18	Archive Search	The Call taker should be able to search the archive records from the system

Sl No	Requirement	Minimum Requirement Description
19	Location of Incident	Once a Location of the incident is marked in the map, The Call taker shall have the facility to see for various 'Location of Interest (LOI)' near a case location like nearest Hospital, Blood Bank, Fire brigades. (Applicable in Dispatch Officer module also).
20	Display of Fire Station Name	The software should have the facility in the system to populate within it, the relevant, Fire stations/ Fire Tenders (Fire brigades), whenever a new case is created to save precious time ineffective response to a distress call
21	Update Existing Cases	The software should allow the Call taker to update Or modify existing case details for any additional or supplementary information related to the same. Also there should be provision to attach relevant files like pdf, Word etc.to the event, for ensuring an effective response
22	Alert Notification	Software should have capability to alert a Call taker or supervisor if a case is not attended in pre-defined time duration.
23	Pre-Defined Q&A	A freely configurable structured query script should be available within the software to assist the Call taker with pre-defined Q&A to ask for urging the call, SMS response and web response. Based on the Case and Case subtype, the response for Call taker should be prompted
24	User Defined Alarm	The application should be configured with user-defined alarm modules that will be flashed on all the other screens in case of major incident, for ex. Terrorist attack.
25	Case Cancel or Close	The Case like rally should be expired automatically by the system once the time defined for the Case gets over or software should have a provision that supervisor can close Or Cancel Or postponed the Case manually into the system
26	Call Back	Call taker should be able to call back the caller with the click of the mouse.
27	Call Address Conflict Handling	It should be possible to find the numbers whose subscriber information and caller information recorded by the Call taker are different and generate a report for the concerned agency.
28	Case Acknowledgement	System should be capable to send an SMS to the caller stating the Case Number, acknowledgment, brief text of the complaint and caller or non-Caller can verify the status through email Or SMS to Non-Emergency helpline
29	Incident Scheduling and Mapping	Incident-scheduling functionality should be available in proposed software for future Cases like, VIP Visit, Rally, Festival etc. The software shall have provisions of setting the date and time for the particular Case, automatic Case should be generated on that date

Sl No	Requirement	Minimum Requirement Description
30	Incident Scheduling and Mapping	The Scheduled Case feature should allow operators to create, edit, delete, and search for a scheduled Case.
31	Language Support	It should be possible to switch between English and Hindi languages. Software should have support for English, Hindi language. Display and input both functionality of given languages should be provided in the application.
32	General Requirements	The system should support the use of primary incident type and a sub incident type to narrow down certain generic incidents. For example, a primary incident type could be "Fire", sub incident type could be "Commercial", "Residential" etc.
33	Call Conference	Call taker should be able to do conference call with Call takers in same centre or other Dial 101 centre Or Other dialled number by the Call taker.
34	Other Call taker Status For Call Conference Or Forward Call	Call taker should be able to see the Call takers status (like busy Or Free) with Call taker extension and forward Or transfer Or conference call with the caller
35	Transfer Call	Call taker should be able to transfer the call to the dispatch Officer who is sitting at District Control room to further assessment in emergency case
36	Outbound Call	Call taker should be able to see any type of call like Missed call Or Drop Call Case and can call back from the application
37	Outbound Call	Call taker should be able to dial the international number in case of international caller is in distress and contact to the proposed system
38	General Requirement	CAD Should have a capability to merge or split the case if the cases are of same type or different however it all depends on the situation
39	Standard Operating Procedures	The software should have capabilities to set the Standard Operating Procedures (SOP)for Call takers. The same needs to be invoked during Case creation by the Call taker. It should also be possible to remodel the Case, Case sub types, priorities and type of service required by using a remodelling tool.
40	Location Storage History and Optimization	The software should store Or update the location history of the caller in CAD database. This history should be gradually increased and optimized in the system as per requirement
41	Physically Challenged Citizen	The CAD software should have a capability to categorise the citizen during the case analysis where the citizen is physically challenged such as Blind, Dumb, deaf and allocate the case to appropriate. These situations should be assessed by the Call Taker and then transferred to the most suitable Call Taker.

Sl No	Requirement	Minimum Requirement Description
42	Fire Tender Dispatch to Incident Sites	The Software should suggest the fire tenders closest to the location of incident. The dispatcher shall choose which unit(s) to dispatch and it should be possible to do so with drag-and-drop ease
43	Dispatching	The Case, once classified and detailed by the communication Call taker, shall be passed by the system to Dispatch Officer screen with the call of the user
44	Case Information	The software should display all the information entered by the Call taker for a case. It should display the location as identified by the CO on the map. The Dispatch Officer should also have the option of relocating the case
45	Dispatch Decision	The software should suggest fire tender for dispatch based on a pre-defined algorithm. The conditions could include jurisdiction, proximity, specialization, on duties resources etc. The Dispatch Officer shall choose which fire tenders to dispatch and it should be possible to do so with a click of a button.
46	MDT Notification	The Dispatch Officer should be able to send all the details of the incident to the MDT device, wherein the official in the fire tender is able to view the complete details of the call as a “Common Operating Picture” for the Call Taker/Dispatcher and the MDT staff. The DO can also SMS, send push notification into MDT CAD application. Dispatch Officer should be able to call the fire tender person through driver in case of emergency also The Dispatch Officer should be able to send SMS to the nearest fire station supervisor and broadcast the same to multiple receivers if required
47	Case Status by fire tender	The Dispatch Officer should be able to enter the status of the case as reported by the Responding fire tender as an option, if the MDT cannot update the status directly
48	Call Taking and Dispatching	Upon discovering that a call is of an emergency nature, the Call taker should be able to alert the Dispatch Officer and other official users. They should begin dispatching as the call proceeds. Therefore, the case form should be displayed on the Dispatch console as it is being populated by the Call taker and updated
49	Fire Tender Tracking and Status Update	The CAD Integrated GIS map should display the assigned, unassigned fire tenders using appropriate and intuitive graphical symbols. The Dispatch Officer can command an assigned fire tenders to proceed to the case location through defined media or through dispatching the case information.
50	Fire Tender Tracking and Status Update	The software should be capable of displaying the fire tenders on the GIS map with colour coding according to their current status. Fire tender icon colour should change automatically with their change in status i.e., dispatch, end-route, at scene, available etc. The entire movement of a fire tender from being assigned to a case till arrival upon scene should be time stamped and monitored by the Dispatch Officer. Appropriate alerts should be generated when a fire tender

Sl No	Requirement	Minimum Requirement Description
		does not send its GPS location for a defined (changeable dynamically) time.
51	Asset Tracking	The CAD Integrated GIS map should identify the nearest assets such as water sources, hydrants, police stations, hospitals etc. around the incident location, with uniform colour coding and display of all the related asset information.
52	Case Update	The software should have the capabilities to record all case related information changes Or updating made after the creation of case by the same or different Call takers, Dispatch Officers, Supervisors.
53	Fire Tender Playback	Proposed software should have the tools to provide the playback of the fire tender movement data, displayed on the integrated GIS Map. The map should be an integral part of the CAD itself.
54	Alarm for New Case	The software shall provide an alarm or alert for every new case entered in the system
55	Audio Visual Indication	The Software should provide with an indicator to indicate that a case has exceeded the predetermined time in its current status still the closure
56	Case Status	There should be facility for case symbolization. To facilitate easy identification of case status (pending & open),cases should be displayed on map with different colours
57	Shortest Path Indication	There should be provision for shortest route to guide fire tenders in the MDT Application. In case the MDT map does not show the same details to the driver in the fire tender then the Dispatch Officer can find from the GIS based map the shortest path from the dispatched fire tender to the case location and convey the shortest path direction to the dispatched fire tender. The shortest path feature allows user to identify the shortest path or route between the source and destination.
58	Display of Cases and Resources on Map	There should be provision for display of field resources and open/pending cases on map
59	Recording of all Fire Tender movements on map	There should be provision for recording of all fire tender movements on map-date wise, fire tender wise.
60	Reviewing	The software should facilitate viewing of cases and fire tenders chronology
61	General Requirement	The Dispatch Officer should be able to dispatch the incidents to the Mobile Data Terminal fitted in the fire tenders over3G/4G/5G (not limited to) and use SMS as a fall back mode per requirement & SOP definition

Sl No	Requirement	Minimum Requirement Description
62	Interoperability	Software should be capable of swapping between Dispatch Officer Supervisor based on the User authentication, without the need to have separate licenses in each category
63	Standard Operating Procedures(SOP)	The software should have the capabilities to set the Standard Operating Procedures (SOP's) for Dispatch Officer. The same needs to be invoked during creation of case or dispatch the fire tenders.
64	Case Attachments	The software should have a provision to attach any file to a case. The file could be an image, video, audio etc.
65	Case Attachments	When the case is listed in the case list there should be an indication that a case has a file attachment. The indication can be any icon for attachment. All case attachments should be stored in the CAD database for easier backup
66	General Requirements	A Dispatch Officer has the ability to create an incident for a fire tender per a fire tender's request based on the fire tender's observation of an activity (on view field case)And The supervisory officers/identified officers at fire stations should have permission to override the dispatch requirement as assessed at first level of contact. Respective officials can take decisions on fire tender dispatch in case of contingencies and extraordinary situations
67	General Requirement	A Dispatch Officer has the ability to dispatch multiple number of fire tenders on an incident or non-incident activity
68	General Requirement	The originating Dispatch Officer will receive a notification when the stacked case has been worked by someone else. A timer can be configured to notify the Dispatch Officer who originally stacked the call that the partial case has not been completed
69	Configuration & Creation of CAD Master Data base	The software or a separate interface should create Or configure various master database as follows but not limited to the databases. The list may increase based on solution requirement and functional specification 1. Users & Roll creation of Call takers 2. Dispatch Zones Or Groups & Fire Stations 3. Fire tenders information 4. Cases & cases Sub-type 5. Shift Master 6. Skill Master 7. LOI Creation 8. Add Agencies 9.Schedule Report 10. Schedule Backup 11. Language setting and dictionary creation 12. Response Plan
70	General Requirement	Solution should have fully integrated GIS module and be able to identify the location of the caller (using LBS/SDR database/otherwise), fire tender location on preloaded map (GIS Maps) into Call taker desktop. It should have the capability and tools to view attribute details of any object. Mapping Tools to be provided to be able to group the multiple attribute layers and to control (ON and OFF) the same. The map should be part of the CAD Solution itself to enable efficient use of GIS.

Sl No	Requirement	Minimum Requirement Description
71	General Requirement	There should be provision to display map from other sources in addition to the GIS map which is used in the system. Multiple maps should be supported on the same map view to enable the Call Taker for better functioning.
72	Desktop GIS	GIS maps will be pre-loaded into the Call taker desktops for faster performance and data will be rendered on the maps from the centre on real time
73	GIS Interface	GIS engine should be tightly integrated with the CAD software. The user should be able to draw a virtual fence on the map and determine points of interests that are within that fence .The POIs could be Hospitals, Health centres etc. The fence can be drawn as a polygon, rectangle or a circle. The user should be able to find closest POIs (Hospitals, Police Stations etc.) from a point identified on the map OR from an event location OR a MDT location
74	Realtime location of the fire tender	The Software should enable the Dispatch Officer to see the real time fire tender location on the integrated GIS Map. Dispatching tools should have the facility to track the fire tender on the said map.
75	Ability to track Fire Tender in dispatch mode	Tools must be provided to facilitate the Dispatch Officer to be able to monitor the assigned fire tender in various modes like – Dispatch mode, End-route mode, Arrive mode and Available mode. The entire movement of a fire tender from being assigned to any incident till arrival upon scene should be time stamped and monitored by the Dispatch Officer
76	GIS Functionality	Software should support at least the following GIS Functionality - a) MDT and GPS/AVLS interface- for fire tender tracking b) Scale-map should be displayed as per solution requirement and can be scalable further c) Route module-regular & frequent monitoring of any particular location. b) Event and address objects - for each type of call (for duplicate Or repetitive calls) and non-call case (in case of SMS, chat, email etc.)
77	Case location free draw	The software should support registering the Case locations not only in the form of point spots but also append the line or polygon area affected by the same. This is to handle situations wherein the affected Or reported points is an area e.g. accident on a road segment or riot in an area. The Dispatch Officer should be able to freely draw to record such locations in the system. So that the Dispatch Officers can easily setup the staging area locations
78	Hold case	The software should support holding the Case for availability of specific fire tender Or responding unit. Once the field unit is available it gets dispatched automatically to the specified Case
79	Support for mobile devices and	The Mobile Apps should support a latest OS like Windows, Android, IOS ,Linux etc.

Sl No	Requirement	Minimum Requirement Description
	applications	
80	SMS Delivery	SMS should be delivered by the system whenever a fire tender is allocated for dispatch. The message should be delivered to the fire tender mobile phone, Supervisor, Fire station Officer, Control Room Officer.
81	Notification	A Notification should be delivered by the system in the MDT CAD software whenever a fire tender is allocated for dispatch. The message should be delivered to the MDT, Supervisor, Fire station Officer etc. This should be a configurable workflow depending on the SOPs defined for each type of case
82	Remote Viewer for Monitoring and Report Generation for Supervisor	
83	Event Monitoring	The software should facilitate supervision of Control Room operations. The Supervisor should be able to examine each event and ensure appropriate legal action is taken. The Call taker shall be able to call up the complainant to solicit feedback and satisfaction report. Supervisor should be able to issue instruction pertaining to an event while it is in progress
84	Dashboard	Supervisor should have a dashboard to monitor the activity of the Communication Call taker, Dispatch Officers
85	General Requirements	Status of all Call Takers and Dispatchers are updated in real time on the supervisor's screen. The status of each call and the assignment of resources are updated on the view of supervisor. Supervisor shall have all facilities of call taker and dispatcher. Supervisor should be able to issue instructions pertaining to a Case ID while it is in progress
86	General Requirements	Planning & Scheduling for VIP movements: There should be provision for Planning and Scheduling of Events and Resource Movements. Events can be pre-planned in case of any future incidents. Resources can be prescheduled for dispatching in case of VIP movements
87	Response Plan	The Supervisor software should be configure/ create the response plan based on Incident
88	GIS Map	The software should have integrated GIS map with Zoom In, Zoom Out, PAN functionalities. GIS map should display the current scale
89	Event Monitoring	The software should support active event monitoring with detail information and location& Id on the map
90	Reports	The software should have in built web based Reporting module which should be able to generate the reports as per the requirement of Emergency and Fire Services. The reporting module should have

Sl No	Requirement	Minimum Requirement Description
		an ability to create various reports using various options like Date wise, Fire Station, Zone, event Type, Sub-Type etc.
91	Reports	The application should have a variety of reports (which includes but not limited to) following; 1. Call Details 2. Average Response Time 3. 4. Blank Calls, Crank Calls, Emergency Calls, Hot Calls, Information Calls 4. Call per hour 5. Fire Station wise Response time 6. Event Details, events Statistics 7. Events Sub Type 8. Fire Station / Fire Zone wise Report 9. Fire Tender activity, Daily activity summary, Dispatch response, stop 10. fire tender Status summary 11. Fire Tender Maintenance Summary 12. Fire Tender Response Time 13.Active event By event Types
92	Dashboards	There shall be dashboards for different supervisory levels to give them graphical picture of the performance of those within their jurisdictions. 1. Call Trend– Day, week and month 2.Average Response Time for call taking, dispatching and responding units. 3. By Event Type 4. By Fire stations and Fire stations 5.fire tender activity–Run Time and Halt Time 6.Casestatus (open, in progress, resolved, close, etc.)
93	Analysis	The reporting module should have an ability to create various GIS Analysis Reports. It should be possible to select the data on the basis of Zones, Fire Stations, events, event Sub-type, Priority & date and time.
94	Analysis	Incident Query ,Incident Count, Repeat Incident
95	Fire tender Dash Board	The reporting module should have inbuilt dashboard to view the performance and health check of GPS devices fitted in fire tenders
96	Tools for Analysis	There should be software tools for response analysis, mapping and hotspot analysis. It should be possible to select the data on the basis of jurisdictions, date and time of the day range and other data fields. It should be possible to create Thematic Maps like pin mapping, Incident count mapping and repeat Incident count Mapping. It should be possible to do detailed analysis at least the following ways – Hot Spot Analysis, Trend Analysis, Neighbourhood Analysis and Changeover Time Analysis
97	Configuration & Creation of CAD Master Data base	The application software should offer administration tool for optimum utilization of resources, master database creation and other analytical purposes. It shall enable the Systems Administrator to define users & configure their access privileges
98	Configuration & Creation of CAD Master Data base	The software should create /configure various master database like: Users & Roll creation of operators, Dispatch Zones / Groups & Fire Stations, fire tenders, events and event sub types, Shift Master, Skill Master, LOI Creation, Add Agencies, Schedule Report, Schedule Backup, Language setting and dictionary creation.

Sl No	Requirement	Minimum Requirement Description
99	General Requirements	CAD Mobile application is to provide the Mobile Workforce with full access to the event data empowering them to make informed decisions while in the field. It will enable the mobile workforce to remain in communication with the command centre allowing event assignment information to be delivered to the devices as required
100	Display Dispatch Message	The Mobile Application Software should display all the Dispatch related transactions assigned to the respective units. All the event information as dispatched by the dispatcher must be captured and displayed.
101	Update Dispatch Status	On activating an assigned event by the mobile unit staff, the mobile application software should also display the Event & fire tender Status–i.e. dispatch, en-route, at scene, back to base and closed
102	Event Details	On activating an assigned event by the mobile unit staff, the mobile application software should also display event information – i.e. Event-id, Event-Type, Caller Phone Number, Caller Name, Caller Address, on browser and Event location on map window
103	MDT Software Interface	The system should have a provision for the MDT software to facilitate data communication link with the fire tender mounted location devices (GPS). The MDT software should provide tools to manage all data message communication, including real-time fire tender positioning information, between the Dispatch Console and the fire tenders
104	MDT Software Interface	The software must have facility to poll as specific GPS receiver of a fire tender to transmit its current positional information. The software should have capability of detecting fire tenders with speeding violations. In order to ensure the data security, the communication server software should be an integral part of the CAD software and not a 3rd party supply item.
105	Remote Supervisory Interface	The CAD Software should support Remote Supervisory functions and provide CAD and GIS view. It should be possible for the Senior Officials in, Fire Stations belonging to jurisdictions etc. to update the status of the incident. Comprehensive Dashboard, Logs should be available for Jurisdictions and other officials
106	Messaging and Communication Module	
107	Messaging	The CAD software should have an ability for messaging between Call takers (within control room and other state call centre)
108	Messaging	The Messaging module should allow the operator to attach files to the message. These files could be any relevant information like images, videos, documents etc.
109	Messaging	The software should allow a message to be sent as a broad cast to all logged in users including, communication Call taker, Dispatch

Sl No	Requirement	Minimum Requirement Description
		Officers, supervisors and MDT users.
110	Other	
111	General Requirements	The application software should be capable of integrating with Telephony system including Communication Server / IPPBX, ACD and CTI interface. System shall be capable of retaining logs for a period of 3 months. System shall record radio communications; should have provision for integrating with radio system.
112	Other agencies or even senior Call takers can be informed with prefilled data about case via SMS	The software should have the provision to inform pre-defined case data to senior Call takers or other agencies
113	Accuracy	Dispatch Officer will be able to rate the accuracy of incident by CAD
114	Acknowledgement of fire tender	CAD should have a facility which will tell the Call taker about the fire tender that it has been reached to distress caller location or not.
115	General Requirements	The software should be able to schedule & automatically generate reports. Web based Report module should have the ability to produce reports with appropriate charts and graphs.
116	General Requirements	The report generation tool should have the facility to provide the report in both printed and electronic format
117	General Requirements	The application should have a variety of reports like: 1.Call Details 2. Event Details 3. Fleet Summary 4. Operator activity 5. fire tender activity, Daily activity summary, dispatch response 7. Active Event By Event Types 8. Efficiency of call takers speed of response, longest idle time, etc.9.Facility to generate the various graphical reports.
118	CAD Application for MDT	
119	General Requirements	MDT software is to provide the Mobile Workforce with full access to the assigned case with distress GIS Map location to empower them to make informed decisions while in the field.
120	General Requirements	MDT software will enable the mobile workforce to be in contact with Officer over the call, SMS,CAD Application notification etc.
121	Case Acknowledgement	The Dispatcher shall send cases data to the fire tender on its MDT and the fire tender staff shall initiate the response by accepting the Case on the MDT. The software shall be capable of delivering the acknowledgment to the CAD software for receipt of case information

Sl No	Requirement	Minimum Requirement Description
		on the MDT device
122	Display Dispatch Messages	The Software should display all the Dispatch related transactions assigned to the respective fire tenders
123	Case Details	On activating an assigned Case by the fire tender staff, the Software should also display Case information–i.e. Case id, Case type, User Phone Number, User Name, User Address, into the Software and user location on map. The map should be provided by GIS Map Service provider
124	Update Dispatch Status	On activating an assigned case Or incident by the fire tender staff, Software should also display the user Or caller detail, location & fire tender Status like dispatch, end-route, at scene, back to base and closed. It should also enable the MDT users to report case closure
125	Communication	The MDT users should have the ability to provide information to the contact centre Officer Or dispatcher Or Supervisor through SMS messages and case closing reports
126	Updated GIS Maps	MDT GIS map should be for defined local area (such as Fire Stations stations etc.). And that updated data from central server can be refreshed into it remotely.
127	User Location	The software should have the capability to display real-time location of the User on the map and tracking of the user on map
128	(AVLS Software Interface)	The software should be capable to send the location of the fire tender in real time to the data centre
129	Action taken Report	It should also enable the MDT users to report Action Taken by attaching Audio Files, Image Files, Video Files and Text Entry. All Action Taken data should be available to Dispatcher and Supervisor through logs
130	Communication	The Software should support GPRS Message Or SMS Capabilities between the dispatch consoles and fire tender
131	Away User Status Updates	The Software should have functionality to update the Status like Available, Away, On Break, etc. of the Fire personnel
132	Offline Support	MDT user should be able to update the transaction as required in the application even in case of poor or no network connectivity. All the transaction should be stored in the MDT devices and can be sync once the devices is connected
133	Remote Software Updatations	The software should be capable to update Or upgrade the version of the software including GIS maps installed in the MDT remotely

Sl No	Requirement	Minimum Requirement Description
134	OS Support	Mobile application should be available on latest versions of Android OS platform and be upgradable Or portable with latest updates in the application
135	Types and Subtypes	Application will also have list of fire causes like chemical, jungle fire, cylinder blast fire and call closure mechanism

8.2 Monitoring Application Features

The application should be capable of the following –

- c. Defining different zones as per Local Fire Stations.
- d. Mapping of images to zones defined.
- e. Linking zone images to the corresponding Fire Stations
- f. Configure the different detector types installed along with details such as number, type, location, last health check dates and results, last mock drill, etc. The details for each detector shall be further configurable within the system.
- g. Link detector with zone and corresponding images.
- h. Define different type of fire related incidents.
- i. Log events about data received from the detectors.
- j. Log incidents and record details of incident along with status which include
 - i. Location of the incident,
 - ii. Type of fire incident,
 - iii. Timestamp when the call was logged,
 - iv. Timestamp when the first fire brigade unit turned out for dispatch.
 - v. Timestamp for the dispatched unit to reach the location/plant where incident has occurred.
 - vi. Type, Sub-type and Timestamp of the message received from the dispatched unit to the headquarters

(For example –

 1. “Stop” message is sent when no additional fir units are required to be dispatched and “Brigade Call” message is sent when additional units are required.
 2. In case of “Brigade Call” message, further sub-types of “Fire under Control” and “Stop” messages are applicable.
 3. A “All Clear” message is sent when the dispatched units are coming back to the station.

Note - Detailed codification and types of messages shall be provided by the Fire Department which the bidder has to implement in the system)

- vii. Timestamp for the last dispatched unit to reach back to the fire station.
- k. User Maintenance Module to configure different types of users in the system.
- l. Maintain emergency contact details.
- m. Define various rules and maintain them.
- n. Initiate mock trials using fire simulation techniques.
- o. Generate customizable MIS reports with all the above attributes –
 - 1. Area wise report of incidents logged within a period (monthly/quarterly/yearly/custom)
 - 2. Type of incidents reported.
 - 3. Time taken to address incidents along with the type of incident and location.
 - 4. Export report data in standard formats (spreadsheet, printable document format, etc.)
 - 5. Capture the above reports with spatial details on the city base map with different legends.

8.3 Monitoring Station Features

The application should have the following features that are to be used at the Local Monitoring Station

–

- a. GIS Integration with base maps from BSCDCL that can have custom boundaries to be defined as per the area being monitored by the local station. A layer would have to be created with the following information captured on the geographic map of the area –
 - i. Source and Type of incident (Short Circuit/Inflammable/Hazardous/Trash/Vehicle, etc.) raised that helps the fire department pin-point to the actual location of disaster.
 - ii. Type of incident raised that helps the fire department pin-point to the actual location of disaster.
 - iii. Operational status of the fire detection system of all plant locations real-time within the boundary defined.
- b. Provide real-time information giving visual and audible indication of the status of the complete solution, including all associated network nodes.
- c. Provision for citizen feedback in the form of photos, videos etc. should be enabled. The Application should be able to fetch the caller location to trace the incident geo-coordinates with innovative mechanism to come up with the intensity of incident and responder level prediction features, which should result in minimizing the response time.
- d. The state of each network node, including alarms, troubles, supervisory conditions as well as the status of individual devices (such as analog values of intelligent smoke detectors) on the network shall be capable of being displayed at any time in a user-friendly clear and concise manner.
- e. Allow viewing, saving and/or printing of all installation event logs as needed without the need to be physically at the installation site.
- f. In addition to providing real-time remote access to the solution and its network nodes, an interface to provide and configure email notification based on various system/installation status changes. Status events such as alarms, pre-alarms, troubles, disables, etc. shall be capable of being sent via email and SMS to various designated email accounts based on time-of-day and day-of-week settings. Specific custom user text messages shall be configurable for any email and phone number, providing precise and accurate information immediately to critical personnel.

8.4 Integration with AVLS solution of the existing Project

The GPS device used in this project should be integrated to the AVLS software solution of the ITMS or any other existing Project of the BMC/BSCDCL

9 Technical Specifications

9.1 Video Wall Screen

#	Parameters	Minimum Specifications
1	Technology	HD LED Display, Direct LED Backlight
2	Screen Size	55”
3	Basel Size	1.2 mm (Top/Bottom), 2.3 mm (Left/right)
4	Resolution	Full high definition (1080p) 16:9 Widescreen
5	Contrast ratio	1400:1
6	Brightness	500 nit
7	Viewing angle	178 degree/178 degree (H/V)
8	Response time	12 ms
9	Input	HDMI and other inputs as per Video Wall solution offered
10	Control	- On Screen Display (OSD) - IR remote control
11	Operations	24 x 7
12	LED Lifespan	50000 hours (50% Brightness)

9.2 Monitoring Workstation

#	Parameters	Minimum Specifications
1	Processor	Latest generation 64bit X86 Quad core processor(3Ghz) or better
2	Chipset	Latest series 64bit Chipset
3	Motherboard	OEM Motherboard

#	Parameters	Minimum Specifications
4	RAM	Minimum 8 GB DDR3 ECC Memory @ 1600 Mhz. Slots should be free for future upgrade. Minimum 4 DIMM slots, supporting up to 32GB ECC
5	Graphics card	Minimum Graphics card with 2 GB video memory (non- shared)
6	HDD	1 TB SATA-3 Hard drive @7200 rpm with Flash Cache of 64GB SSD
7	Media Drive	NO CD / DVD Drive
8	Network interface	10/100/1000 Mbps autosensing on board integrated RJ-45 Ethernet port.
9	Audio	Line/Mic IN, Line-out/Spr Out (3.5 mm)
10	Ports	Minimum 6 USB ports (out of that 2 in front)
11	Keyboard	104 keys minimum OEM keyboard
12	Mouse	2 button optical scroll mouse (USB)
13	PTZ joystick controller (with 2 of the workstations in SCOC)	PTZ speed dome control for IP cameras Minimum 10 programmable buttons Multi-camera operations Compatible with all the camera models offered in the solution Compatible with VMS /Monitoring software offered
14	Monitor	Three Monitors of 22” TFT LED monitor, Minimum 1920 x 1080 resolution, 5 ms or better response time, TCO 05 (or higher) certified. The TFT Monitor, CPU, Mouse and keyboard workstation shall be of same make.
15	Certification	Energy star 5.0/BEE star certified
16	Operating System	64 bit pre-loaded OS with recovery disc
17	Security	BIOS controlled electro-mechanical internal chassis lock for the system.
18	Antivirus feature	Advanced antivirus, antispymware, desktop firewall, intrusion prevention (comprising of a single, deployable agent) which can be managed by a central server. (Support, updates, patches and errata for the entire contract/ project period)

#	Parameters	Minimum Specifications
19	Power supply	SMPS; Minimum 400-watt Continuous Power Supply with Full ranging input and APFC.

9.3 IP Phones

#	Parameters	Minimum Specifications
1	Display	2 line or more, Monochrome display for viewing features like messages, directory
2	Integral switch	10/100 mbps for a direct connection to a 10/100BASE-T Ethernet network through an RJ-45 interface
3	Speaker Phone	Yes
4	Headset	Wired, Cushion Padded Dual Ear-Speaker, Noise Cancelling headset with mouthpiece microphone, port compatibility with IP Phone
5	VoIP Protocol	SIP V2
6	POE	IEEE 802.3af or better and AC Power Adapter (Option)
7	Supported Protocols	SNMP, DHCP, DNS
8	Codecs	G.711, G.722, G.729 including handset and speakerphone
9	Speaker Phone	Full duplex speaker phone with echo cancellation Speaker on/off button, microphone mute
10	Volume control	Easy decibel level adjustment for speaker phone, handset and ringer
11	Phonebook/Address book	Minimum 100 contacts
12	Call Logs	Access to missed, received, and placed calls. (Minimum 20 overall)
13	Clock	Time and Date on display
14	Ringer	Selectable Ringer tone
15	Directory Access	LDAP standard directory

#	Parameters	Minimum Specifications
16	QoS	QoS mechanism through 802.1p/q

9.4 L2 Switch for Fire Station

#	Parameter	Minimum Specifications
—	Ports	<ul style="list-style-type: none"> • 24 or 48 (as per requirements) 10/100/1000 Base-TX ports and extra 2 or 4 nos of 10G Base SX/LX ports as per network solution offered. • All ports can auto-negotiate between 10Mbps/ 100Mbps/ 1000Mbps, half-duplex or full duplex and flow control for half-duplex ports.
2	Switch type	Layer 2
3	MAC	8 K or more
4	Backplane	56 Gbps capacity (as per network configuration to meet performance requirements of wire speed switching for the connected devices)
5	Forwarding Rate	Packet Forwarding Rate should be 70.0 Mbps or better
5	Port Features	Must support Port Mirroring, Port Trunking and 802.3ad LACP Link Aggregation port trunks
6	Flow Control	Support IEEE 802.3x flow control for full-duplex mode ports.
7	Protocols	<ul style="list-style-type: none"> • IPV4, IPv6 • Support 802.1D, 802.1S, 802.1w, Rate limiting • Support 802.1Q VLAN encapsulation, IGMP v1, v2 and v3 snooping • 802.1p Priority Queues, port mirroring, DiffServ • DHCP support • Support up to 1024 VLANs
8	Access Control	<ul style="list-style-type: none"> • Support port security • Support 802.1x (Port based network access control). • Support for MAC filtering. • Should support TACACS+ and RADIUS authentication

9	VLAN	<ul style="list-style-type: none"> • Support 802.1Q Tagged VLAN and port based VLANs and Private VLAN • The switch must support dynamic VLAN Registration or equivalent • Dynamic Trunking protocol or equivalent
10	Protocol and Traffic	<ul style="list-style-type: none"> • Network Time Protocol or equivalent Simple Network Time Protocol support • Switch should support traffic segmentation • Traffic classification should be based on user-definable application types: TOS, DSCP, Port based, TCP/UDP port number
11	Management	<ul style="list-style-type: none"> • Switch needs to have console port for management via PC • Must have support SNMP v1,v2 and v3 • Should support 4 groups of RMON • Should have accessibility using SSH, Console access, easier software upgrade through network using TFTP etc. Configuration management through CLI, GUI based software utility and using web interface

9.5 Router

#	Parameters	Minimum Specifications
1.	Multi-Services	Should deliver multiple IP services over a flexible combination of interfaces
2.	Ports	As per overall network architecture proposed by the bidder, the router should be populated with required number of LAN/WAN ports/modules, with cable for connectivity to other network elements.
3.	Speed	As per requirement, to cater to entire bandwidth requirement of the project.
4.	Interface modules	Must support minimum 2* 10G Port with necessary SFP+ Modules. Must have capability to interface with variety interfaces.
5.	Protocol Support	Must have support for TCP/IP, PPP Must support IPSEC VPN Must have support for integration of data and voice services Routing protocols of RIP, OSPF, and BGP. Support IPV4 & IPV6
6.	Manageability	Must be SNMP manageable
7.	Scalable	<ul style="list-style-type: none"> • The router should be scalable. For each slot

#	Parameters	Minimum Specifications
		multiple modules should be available. The chassis offered must have free slots to meet the scalability requirement of expansion of the project in the future.
8.	Traffic control	Traffic Control and Filtering features for flexible user control policies
9.	Remote Access	Remote access features
10.	Redundancy	<ul style="list-style-type: none"> Redundancy in terms of Power supply(s). Power supply should be able to support fully loaded chassis All interface modules, power supplies should be hot-swappable
11.	QOS Features	<ul style="list-style-type: none"> RSVP Priority Queuing Policy based routing Traffic shaping Time-based QoS Policy Bandwidth Reservation / Committed Information Rate

9.6 Firewall

Sr.	Minimum Specifications
1.	The proposed solution must allow policy rule creation for application control, user based control, host profile, threat prevention, Anti- virus/Anti-malware, file filtering, content filtering, QoS. The solution should be policy driven for various services.
2.	The proposed solution should support at least 200 Mbps of performance with Firewall, application control, IPS, Anti-Virus/Anti- malware.
3.	Minimum Concurrent Sessions : 100,000 New Connections per Second : Minimum 10K
4.	Interfaces:6 no 10/100/1000 interfaces, 1 out of band management, USB and console interface
5.	Should have minimum 8 GB RAM and 8 GB Flash from day 1
6.	Firewall must support Active-Active deployment OR Active-Passive deployment.

- | | |
|-----------|---|
| 7. | <ul style="list-style-type: none"> • The solution must support Firewall, Application visibility and control natively, without requiring any additional hardware. IPS, Anti- virus/Anti-malware and URL Filtering from day one • The proposed must support on appliance SSL /SSH decryption policy based on IP, User, web category |
| 8. | <ul style="list-style-type: none"> • Should support user based firewall and policy enforcement. • Should be able to manage from central NOC/SOC. • Should support management of device using SNMP V1/V2/V3 |

9.7 Server

	Parameter	Minimum Specifications
1	CPU	Two (2) latest generation Processors with minimum 2.1GHz & 8 cores per socket.
2	Memory	Should have at least 24 DIMM slots per server and support minimum up to 1.5TB of DDR3 or better 2666 MHz memory.
3	Hard Disk Drive	The server should Support up to 10 hot-swappable SAS, NL-SAS and SSD drives. Server should supplied with 2 TB of usable storage.
4	Ports	<ul style="list-style-type: none"> • 1 serial port • 4 USB 3.0/2.0 ports • 1 VGA video port ,HDMI port
5	Cabinet	Rack
6	OPERATING SYSTEM	Microsoft Windows Server ,Red Hat Enterprise Linux (RHEL) ,SUSE Linux Enterprise Server (SLES),UNIX
7	DVD ROM	Internal / External
8	Networking	Should have 2 * 10 GbE Base T(embedded) LAN ports Should provide support Dual 10G SFP+ ports. The same adapter should be upgradable to 40G ports for future requirements. Should support Dual port 16Gbps FC HBA.
9	Power Management	Should have hot swappable redundant power supplies
10	UPS	Sine wave UPS with external batteries
11	Anti-virus	For a period of three years

12	Features	<ul style="list-style-type: none"> • RAID enabled with stripping and mirroring • Virtualization (Hardware and software)
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9.8 L3 Switch for Server

#	Parameter	Minimum Specifications
1	Ports	<ul style="list-style-type: none"> • 24 or 48 (as per requirements) 10/100/1000 Base-TX/FX ports and extra 2 or 4 nos of 10G Base SX/LX/LR ports as per network solution offered. • TX/FX Split as per field/site requirement • All ports can auto-negotiate between 10Mbps/ 100Mbps/ 1000Mbps, half-duplex or full duplex and flow control for half-duplex ports.
2	Switch type	Layer 3
3	MAC	32K or more
4	Backplane	Properly sized Switching fabric capacity (as per network configuration to meet performance requirements of wire speed switching for the connected devices)
5	Port Features	Must support Port Mirroring, Port Trunking and 802.3ad LACP Link Aggregation port trunks
6	Flow Control	Support IEEE 802.3x flow control for full-duplex mode ports.
7	Protocols	<ul style="list-style-type: none"> • IPV4, IPV6 • Support 802.1D, 802.1S, 802.1w, Rate limiting • Support 802.1Q VLAN encapsulation, IGMP v1, v2 and v3 snooping • 802.1p Priority Queues, port mirroring, DiffServ • DHCP support • Support up to 1024 VLANs • Support IGMP Snooping and IGMP Querying • Support Multicasting • Should support Loop protection and Loop detection,

		<ul style="list-style-type: none"> • Should support Ring protection
8	Access Control	<ul style="list-style-type: none"> • Support port security • Support 802.1x (Port based network access control). • Support for MAC filtering. • Should support TACACS+ and RADIUS authentication
9	VLAN	<ul style="list-style-type: none"> • Support 802.1Q Tagged VLAN and port based VLANs and Private VLAN • The switch must support dynamic VLAN Registration or equivalent • Dynamic Trunking protocol or equivalent
10	Protocol and Traffic	<ul style="list-style-type: none"> • Network Time Protocol or equivalent Simple Network Time Protocol support • Switch should support traffic segmentation • Traffic classification should be based on user-definable application types: TOS, DSCP, Port based, TCP/UDP port number
11	Management	<ul style="list-style-type: none"> • Switch needs to have console port for management via PC • Must have support SNMP v1,v2 and v3 • Should support 4 groups of RMON • Should have accessibility using SSH, Console access, easier software upgrade through network using TFTP etc. Configuration management through CLI, GUI based software utility and using web interface

9.9 Water Level Sensor with Router for Fire Tenders

Sr. No	Parameters	Minimum Required Specification
1	Water Gauge Type	To detect water level in fixed water tank of tanker vehicle (Fire Tender or Commercial water tanker)
2	Water Level Range	0 to 7 feet of Water level
3	Linearity and Hysteresis	±0.1% FS
4	Accuracy	±0.1% FS at constant temperature

Sr. No	Parameters	Minimum Required Specification
5	Warm Up Time	10 ms
6	Operating Temperature	0 to 55 degree C
7	Connecting Cable	Rugged Cable to carry Signal from level gauge to GPRS Unit
8	GPRS Unit	To send Water Level output
9	Power Supply	DC Operations (To connect to vehicle's battery)

9.10 Fuel Level Sensor for Fire Tenders

Sr. No	Parameters	Minimum Required Specification
1	Head protection class	IP67
2	Temperature range	40° to 85°C (-40° to 185°F)
3	Pipe length	up to 1,200 mm (47.25”) max.
4	Materials	PA and aluminum
5	Resistance change	
6	Measure resolution	10-35 mm (0.39-1.4”) max.
7	Various connector options	
8	Mounting thread options	NPT, G & others

9.11 Incidental Civil and Electrical work at sites

If any civil work and electrical work in the field related to scope of work, shall be carried out by bidder. The rate for the same can be quoted in the bid after preliminary survey.

9.12 GPS Units for Fire Tenders and other vehicles

This shall be as per (Vehicle Location Tracking, AIS – 140 standards May, 2017 further amended as per amendment one (11 Dec, 2017).

9.13 Mobile Data Terminal for Fire Tenders

#	Parameter	Minimum Specifications
1.	Type	Android based Rugged In-Vehicle Mobile Data Terminal (Special-built)
2.	OS	Android 5.1 or higher
3.	Processor	Quad Core with GPU
4.	Display	7 inch WVGA(800×480) TFT-LCD Multi-touch capacitive touchscreen control
5.	Brightness	450 nits
6.	Contrast Ratio	500:1
7.	GPS	Built-in GPS module for positioning
8.	Cellular Interface	3G/4G for Data exchange via GPRS (SIM card also to be supplied)
9.	Interfaces	USB, OTG, Ethernet(POE)
10.	Camera	Built-in 0.3MP CMOS front camera
11.	Audio	Built-in Speaker, Internal Microphone
12.	Power Supply	DC In (from Vehicle electrical System)
13.	Battery	1 hour operation without external power
14.	Operating Temperature	0 to 60 degree C
15.	Mobile Data Usage	To receive and send data to Control Room via GPRS
16.	Mounting	Flexible mounting with VESA and on-dash bracket

#	Parameter	Minimum Specifications
17.	Ruggedness/Protection	IP64, MIL-STD-810F Method 516.6
18.	Certification	FCC, UL, CE

9.14 Mobile NVR for Fire Tenders

#	Minimum Specifications
1.	1 DIN Standard Size
2.	Shock Absorbent Design
3.	1 x 2.5 inch Hard disk (1 TB), 1 Memory card (
4.	WIFI module (802.11 b/g/n supported, 2.4GHz)
5.	4 Channel Real-time H.264 encoding, 25 fps
6.	25 fps
7.	Signals, Ethernet and USB Interfaces
8.	0 to 55 C working temperature

9.15 Fix Minidome Camera for Fire Tenders

#	Parameter	Minimum Specifications or better
1.	Video Compression	H.264
2.	Video Resolution	1920 X 1080, 2 MP
3.	Frame rate	Min. 25 fps
4.	Image Sensor	1/3” or 1/4 ” Progressive Scan CMOS
5.	Lens	Internal 2.8mm-12mm HD Varifocal lens
6.	Minimum Illumination	Colour: 0.01 lux, (at 30 IRE)

#	Parameter	Minimum Specifications or better
7.	Day/Night Mode	IR-Cut Removable (ICR) Filter for Day/Night switching
8.	S/N Ratio	≥ 50 Db
9.	IR	30 meter IR
10.	Wide Dynamic Range	True WDR up to 100 dB
11.	Audio	Full duplex, line in and line out, G.711, G.726
12.	Local storage	microSD memory card of 128 GB . In the event of failure of connectivity to the central server the camera shall record video locally on the SD card automatically. After the connectivity is restored these recordings shall be automatically merged with the server recording such that no manual intervention is required to transfer the SD card based recordings to server.
13.	Protocol	HTTP, HTTPS, FTP, RTSP, RTP, TCP, UDP, RTCP, DHCP, ONVIF Profile S
14.	Security	Password Protection, IP Address filtering, User Access Log, HTTPS encryption
15.	Intelligent Video	Motion Detection & Tampering alert
16.	Protection	IP66 and IK10
17.	Operating conditions	0 to 50°C
18.	Casing	IP66 and IK10 rated
19.	Certification	UL/EN, CE, FCC Certifications
20.	Power	802.3af PoE (Class 0) and 12VDC/24AC
21.	Location	2 per Fire Tender
22.	Cables	All cables and connectors must be hidden and not visible to passengers, crew etc.

9.16 3G/4G Router in Fire Tender

#	Parameter	Minimum Specifications
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#	Parameter	Minimum Specifications
1	Type	Managed 3G/4G Branch Router with Switch ports
2	WAN Port	One 10/100 Mbps Ethernet
3	Wireless Connectivity	<ul style="list-style-type: none"> • 4G, 3G Connectivity • Dual SIM support
4	LAN Ports	<ul style="list-style-type: none"> • 4-port 10/100-Mbps managed switch With Two Power over Ethernet (PoE) ports
5	Memory	<ul style="list-style-type: none"> • Minimum 1 GB DRAM
6	Protocols	<ul style="list-style-type: none"> • IPV4,IPV6 • Support 802.1Q VLAN • DHCP support • IGMP • SNMP Management
7	Security	<ul style="list-style-type: none"> • Support IPSec • Support 3DES • Support AES
8	Operating Temperature	0 -50 C or better Industrial Grade Rating
9	Management	Console port for management via a console terminal or PC
10	Compliance	UL, EN, IEC

9.17 Structured Cabling

#	Item	Minimum Specifications
1	Standards	ANSI TIA 568 C for all structured cabling components
2	OEM Warranty	OEM Certification and Warranty of 15-/ 20 years as per OEM standards
3	Certification	UL Listed and Verified

9.18 Wiring

#	Description
1.	PVC insulated copper conductor cable shall be used for sub circuit runs from the distribution boards to the points and shall be pulled into conduits. They shall be stranded copper

#	Description
	conductors with thermoplastic insulation of 650 / 1100 volts grade. Colour code for wiring shall be followed.
2.	Looping system of wiring shall be used, wires shall not be jointed. No reduction of strands is permitted at terminations.

9.19 Cable Work

#	Description
1.	Cable ducts should be of such dimension that the cables laid in it do not touch one another. If found necessary the cable shall be fixed with clamps on the walls of the duct. Cables shall be laid on the walls/on the trays as required using suitable clamping/ fixing arrangement as required. Cables shall be neatly arranged on the trays in such manner that a criss-crossing is avoided and final take off to switch gear is easily facilitated.
2.	All cables will be identified close to their termination point by cable number as per circuit schedule. Cable numbers will be punched on 2mm thick aluminium strips and securely fastened to the. In case of control cables all covers shall be identified by their wire numbers by means of PVC ferrules. For trip circuit identification additional red ferrules are to be used only in the switch gear / control panels, cables shall be supported so as to prevent appreciable sagging. In general distance between supports shall not be greater than 600mm for horizontal run and 750mm for vertical run.
3.	Necessary earthing arrangement shall be made alongside the rising mains enclosure by Mean of a GI strip of adequate size bolted to each section and shall be earthed at both ends. The rising mains enclosure shall be bolted type.
4.	The space between data and power cabling should be as per standards and there should not be any criss-cross wiring of the two, in order to avoid any interference, or corruption of data.

To ensure that ICT systems are delivered at the performance level envisaged, it is important that an effective monitoring and management system be put in place. It is thus proposed that a proven Enterprise Management System (EMS) is proposed by the bidder for efficient management of the system, reporting, SLA monitoring and resolution of issues. Various key components of the EMS to be implemented as part of this engagement are –

1. Network Monitoring System
2. Helpdesk System

The solution should provide a unified web based console which allows role based access to the users.

1. Network Management System

Solution should provide fault & performance management of the server side infrastructure and should monitor IP\SNMP enabled devices like Routers, Switches, Sensors, etc. Proposed Network Management shall also help monitor key KPI metrics like availability, in order to measure SLA's. Following are key functionalities that are required which will assist administrators to monitor network faults & performance degradations in order to reduce downtimes, increase availability and take proactive actions to remediate & restore network services.

#	Minimum Specifications
1	The proposed solution must automatically discover manageable elements connected to the infrastructure and map the connectivity between them. Solution should provide centralized monitoring console displaying network topology map.
2	Proposed solution should provide customizable reporting interface to create custom reports for collected data
3	The system must use advanced root-cause analysis techniques and policy-based condition correlation technology (at network level) for comprehensive analysis of infrastructure faults.
4	The system should be able to clearly identify configuration changes and administrators should receive an alert in such cases.
5	The solution should support multicast protocols too, if the overall project solution offered includes multicast.

2. Centralized Helpdesk

#	Minimum Specifications
1	Helpdesk system should provide incident management, problem management templates along with helpdesk SLA system for tracking SLA's pertaining to incident resolution time for priority / non-priority incidents.
2	System should also automatically create tickets based on alarm type
3	The proposed helpdesk solution must provide flexibility of logging, viewing, updating and closing incident via web interface for issues related to the project.
4	IT Asset database should be built and managed by the bidder, in order to carry out the scope of work items.

9.20 Anti-Virus Solution

The following features are required for centralized anti-virus solution, to protect all computing resources (servers, desktops, other edge level devices, etc.):

1. Ability to scan through all file types and various compression formats. Ability to scan for HTML, VBScript Viruses, malicious applets and ActiveX controls.
2. Must update itself over internet for virus definitions, program updates etc. (periodically as well as in push-updates in case of outbreaks)
3. Able to perform different scan Actions based on the virus type (Trojan/ Worm, Joke, Hoax, Virus, other)

4. Shall provide Real-time product Performance Monitor and Built-in Debug and Diagnostic tools, and context- sensitive help.
5. The solution must provide protection to multiple remote clients
6. Shall provide for virus notification options for Virus Outbreak Alert and other configurable Conditional Notification.
7. Should be capable of providing multiple layers of defines
8. Shall have facility to clean, delete and quarantine the virus affected files.
9. Should support online update, where by most product updates and patches can be performed without bringing messaging server off-line.
10. Should support in-memory scanning so as to minimize Disk IO.
11. Should support Multi-threaded scanning
12. Should support scanning of nested compressed files
13. Should support heuristic scanning to allow rule-based detection of unknown viruses
14. All binaries from the vendor that are downloaded and distributed must be signed and the signature verified during runtime for enhanced security.

9.21 UPS

#	Parameters	Minimum Specifications
1	Capacity	Adequate capacity to cover all above IT Components at respective location
2	Output Wave Form	Pure Sine wave
3	Input Power Factor at Full Load	>0.90
4	Input	Three Phase 3 Wire for over 5 KVA
5	Input Voltage Range	305-475VAC at Full Load
6	Input Frequency	50Hz +/- 3 Hz
7	Output Voltage	400V AC, Three Phase for over 5 KVA UPS
8	Output Frequency	50Hz+/- 0.5% (Free running); +/- 3% (Sync. Mode)
9	Inverter efficiency	>90%
10	Over All AC-AC Efficiency	>85%

#	Parameters	Minimum Specifications
11	UPS shutdown	UPS should shutdown with an alarm and indication on following conditions 1)Output over voltage 2)Output under voltage 3)Battery low 4)Inverter overload 5)Over temperature 6)Output short
12	Battery Backup	60 minutes in full load
13	Battery Backup	60 minutes in full load
14	Battery	VRLA (Valve Regulated Lead Acid) SMF (Sealed Maintenance Free) Battery
15	Indicators & Metering	Indicators for AC Mains, Load on Battery, Fault, Load Level, Battery Low Warning, Inverter On, UPS on Bypass, Overload, etc. Metering for Input Voltage, Output Voltage and frequency, battery voltage, output current etc.
16	Audio Alarm	Battery low, Mains Failure, Over temperature, Inverter overload, Fault etc.
17	Cabinet	Rack / Tower type
18	Operating Temp	As per Allahabad weather conditions

9.22 Networking Standards

- ANSI/TIA-942, Telecommunications Infrastructure Standard for Data Centres
- ANSI/TIA/EIA/568-C.1, Commercial Building Telecommunications Cabling Standard – 2009
- ANSI/TIA/EIA 568-C.2, Copper Cabling Components Standard
- ANSI/TIA/EIA 568-C.3, Optical Fibre Cabling Components Standard
- ANSI/TIA/EIA-569-B, Commercial Building Standard for Telecommunications Pathways and Spaces
- ANSI/TIA/EIA-606-A, Administration Standard for the Telecommunications Infrastructure of Commercial Buildings
- ANSI/J-STD-607-A, Commercial Building Grounding (Earthing) and Bonding Requirements for Telecommunications

Building Industries Consulting Services International (BICSI) Telecommunications Distribution Methods Manual (TDMM) – Preferred

10 Annexure I- List of Fire Stations

Sr. No.	Name of the Station	To be Developed
1	Fatehgarh	Central Fire Control Station (CFCS)
2	Pulbogda	Fire Control Station (FCC)
3	Bairagarh	Fire Control Station (FCC)
4	Cholla	Fire Control Station (FCC)
5	Matamandir	Fire Control Station (FCC)
6	Govindpura	Fire Control Station (FCC)
7	Kolar	Fire Control Station (FCC)
8	ISBT	Fire Control Station (FCC)
9	Gandhinagar	Fire Control Station (FCC)
10	UnaniSafaikhana	Fire Control Station (FCC)
11	Kabadkhana	Fire Control Station (FCC)

11 Annexure II- List of Products/Solutions Which Requires MAF from OEMs

Sr. No.	Product	MAF Submitted (Yes/No)
1.	Video Wall Cubes (LED)	
2.	Operating Work Stations	
3.	IP Phones	
4.	UPS	
5.	Public Address System	
6.	Cameras	
7.	Dialer	
8.	Mobile Data Terminal	
9.	Mobile NVR	
10.	Vehicle Camera	
11.	GPS Device	
12.	Router	

Sr. No.	Product	MAF Submitted (Yes/No)
13.	Sensors (Fuel and Water)	
14.	Server	
15.	Switch	
16.	Router	
17.	Firewall	
18.	Applications (CRM/VMS/VTMC)	
19.	Bandwidth provider	