

BRIHANMUMBAI MUNICIPAL CORPORATION

Disaster Management Department

Sub.: This Department's E-Tender for "Providing Comprehensive Communication Solution with Redundancy for five years to Disaster Management Department".

Ref.: RFB No: 2025_MCGM_1212245_1

Minutes of Pre-Bid Meeting held on 28-08-2025

Sr.No	Page No	Section No	Point No	Existing Clause	Clarification/Query of Bidder	Prospective Bidder / SI	Remarks / Clarification by BMC
1	34	1. Evaluation of Prequalification 3. Experience	3.1	Bidder/SI should have Experience with central/state government organizations, municipal corporations, and critical infrastructure projects.	Request you to please ammend the clause as "Bidder/SI should have Experience with central/state government organizations/ municipal corporations/critical infrastructure projects.	M/s Arceus Infotech Pvt Ltd	The existing Clause shall be read as: "Bidder/SI should have Experience with central / state government organizations / municipal corporations in critical infrastructure projects . In the Information Technology Act 2000, Critical Information Infrastructure has been defined as: "Critical Information Infrastructure means the computer resource, the incapacitation or destruction of which, shall have debilitating impact on national security, economy, public health or safety". By extension, information infrastructure supporting the operations of Critical Infrastructure (CI) marks this as Critical Information Infrastructure (CII). These Networks operate/monitor and control important governmental and Societal functions and services including, but not limited to, Power (Generation/transmission/ distribution etc), Telecommunication (mobile/landline/internet etc), Transportation (Air/land/rail/sea etc), Defence etc.
2	35	2. Financial Situation	2.2	Average Annual Turnover from System Integration Projects: The bidder/SI should have minimum average annual turnover of 176 Crores, from system integration contracts in the last three (3) years	Request you to ammend the clause as "The bidder/SI should have minimum average annual turnover of 176 75 Crores, from system integration contracts in the last three (3) years	M/s Arceus Infotech Pvt Ltd	The request can not be accepted as the financial aspects of this tender document are as per MEITY guidelines. Hence, the tender clause prevails.
3	37	2. Evaluation of Technical & Commercial Bid	1	Average Annual Turnover from System Integration Projects: The bidder/SI should have minimum average annual turnover of 176 Crores, from system integration contracts in the last three (3) years 1. More than 200 Crores: 20 Marks 2. 176 Crores to 200 Crores: 15 Marks	Requesting you to ammend the clause as "Average Annual Turnover from System Integration Projects: The bidder/SI should have minimum average annual turnover of 176 75 Crores, from system integration contracts in the last three (3) years 1. More than 200 100 Crores: 20 Marks 2. 176 75 Crores to 100 200 Crores: 15 Marks	M/s Arceus Infotech Pvt Ltd	The request can not be accepted as the financial aspects of this tender document are as per MEITY guidelines. Hence, the tender clause prevails.
4	98	A.2 INFORMATIONAL MATERIALS - 0.1		The solution proposed should have high level of service agreement with uptime commitment of 99.99%.	Please consider 99.5% uptime instead of 99.99%	M/s Arceus Infotech Pvt Ltd	The request can not be accepted considering the need of proposed communication system in emergencies. Hence, the tender clause prevails.
5	74	4 - SITC of Cloud Telephony Solution		AI-powered chatbots to assist with queries.	Please share use case	M/s Arceus Infotech Pvt Ltd	Tender clause is self explanatory.

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6	74	4 - SITC of Cloud Telephony Solution		Voice-to-text transcription for accurate records and better analysis of customer interactions	Please share use case	M/s Arceus Infotech Pvt Ltd	Tender clause is self explanatory.
7	100	B. Scope of Work - f		Integration of existing EPABX system & soft phone software with proposed solution	Require more details on existing Infrastructure to be integrated with the new system	M/s Arceus Infotech Pvt Ltd	Details of existing EPABX installed at Disaster Management Department are attached separately at the end of this document.
8	77	Technical specifications of Connectivity 2 (4G/5G Internet & SDWAN or Equivalent)		Switch(12 port-1G Ethernet-rj45)	1) Please confirm if these Switches are required for all 74 locations or at DC and DR only 2) For DC and DR, minimum 30 ports switch will require for one LAN port, 14 IP Phone and 14 Computers. Please confirm exact port requirement for DC and DR	M/s Arceus Infotech Pvt Ltd	Referred switch is for Minimum Infrastructure as follows: 1. At 72 Control Rooms: 2 PCs, 1 IP phone, 3 redundant port. 2. At DC/DR: 5 PCs, 5 IP Phones, 2 redundant ports Prospective bidders are requested to design the network component considering atleast 50% additional requirements of ports in future.
9	75	7 - CSMC of all Hardwares		All the hardware and systems will be handed over to the department post expiry of the contract period	Solution would be provided on SAAS model which includes applications and hardware so after expiry of contract period as a process Solution provider will take back all hardwares deployed	M/s Arceus Infotech Pvt Ltd	This clause is amended as follows: All the hardware, systems, applications (exclusively installed/developed for subject work) will be handed over to the department post expiry of the contract period.
10	103	B. Scope of Work - 26		The Successful SI shall solely be responsible to protect the software, local servers, servers deployed for subject work from any type of Virus Attacks	Protection of Softwares and Local servers deployed by BMC would be in BMC Scope	M/s Arceus Infotech Pvt Ltd	Tender clause is self explanatory. Hence, the tender clause prevails.
11	85	3. PERFORMANCE AND ADVANCE PAYMENT SECURITY FORMS	1.1 PERFORMANCE SECURITY FORM (BANK GUARANTEE)	(For a sum of 10% of the value of the contract)	In addition to below queries, we require one more clarification on calculation of Add. Security deposit with respect to this bid.	M/s Arceus Infotech Pvt Ltd	The clauses for Security Deposit, Additional Security Deposit & Performance Bank Guarantee applicable for subject work tender is attached at the end of this document.

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12	34	1. Evaluation of Prequalification 3. Experience	3.1	Bidder/SI should have Experience with central/state government organizations, municipal corporations, and critical infrastructure projects.	Please consider Bidder/SI should have experience with Center OR State Government Organisation OR Municipal Corporations OR Critical Infrastructure Projects	M/s ITI Ltd	The existing Clause shall be read as: "Bidder/SI should have Experience with central / state government organizations / municipal corporations in critical infrastructure projects. In the Information Technology Act 2000, Critical Information Infrastructure has been defined as: "Critical Information Infrastructure means the computer resource, the incapacitation or destruction of which, shall have debilitating impact on national security, economy, public health or safety". By extension, information infrastructure supporting the operations of Critical Infrastructure (CI) marks this as Critical Information Infrastructure (CII). These Networks operate/monitor and control important governmental and Societal functions and services including, but not limited to, Power (Generation/transmission/ distribution etc), Telecommunication (mobile/landline/internet etc), Transportation (Air/land/rail/sea etc), Defence etc.
13	35	Section III - Evaluation and Qualification Criteria 2. Financial Situation	2.2Average AnnualTurnover from System Integration	The bidder/SI should have minimum average annual turnover of 176 Crores, from system integration contracts in the last three (3) years	Since the overall project budget is fixed , and as per CVC guidelines, the Annual Turnover criteria should normally be linked to the estimated project cost and not exceed the project , we request you to kindly amend the Annual Turnover criteria in line with the project budget. This amendment will help the department to get more competitive bids and encourage wider bidder participation, thereby ensuring better value for the project	M/s Hughes communications India Pvt Ltd	The request can not be accepted as the financial aspects of this tender document are as per MEITY guidelines. Hence, the tender clause prevails.
14	35	Section III - Evaluation and Qualification Criteria 3 Experience	3.2.1 Specific Experience	The bidder/SI should have experience of "Supply, installation, testing & commissioning (SITC) of IT Infrastructure including Network components, optical fibre components in System mplementation contracts" in the last Seven years. <input type="checkbox"/> One Project of minimum contract value of 28.16 Crores or <input type="checkbox"/> Two Projects, each of minimum contract value of 21.10 Crores or <input type="checkbox"/> Three Projects, each of minimumcontract value of 14.08 Crores	We Request you amend the is clause as below One Project of minimum contract value of ₹21 Cr (≥ 50% of project cost), or Two Projects, each of minimum contract value of ₹10.5 Cr (≥ 25% of project cost), or Three Projects, each of minimum contract value of ₹7 Cr (≥ 20% of project cost). This will encourage maximum bidder participation, resulting in more competitive bids and better value for the department. We kindly request your consideration for this amendment.	M/s Hughes communications India Pvt Ltd	The request can not be accepted as the financial aspects of this tender document are as per MEITY guidelines. Hence, the tender clause prevails.

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15	35	Section III - Evaluation and Qualification Criteria 3 .Experience	3.2.2 Project Cost Experience	<p>The Bidder / SI in the last Seven years (as on date of Submission of bid) must have executed similar project.</p> <p>Similar project means: Supply, Installation & Configuration of Network Infrastructure (Switches/Router/SDWAN including passive components etc.) for min. 75 Location in single Work Order</p>	<p>With reference to the tender document, we respectfully submit the following request for amendment in the clause related to Network Infrastructure experience:</p> <p>Addition of Wireless Technology Experience</p> <p>Considering that V-SAT, 4G/5G VPN modems and wireless technologies are prime components of this project, we request that wireless network experience also be included in the eligibility criteria. This will ensure participation of bidders with relevant expertise in next-generation communication technologies.</p> <p>Removal of Location-Specific Quantity Restrictions</p> <p>The current requirement specifies locations/quantities in a very restrictive manner, which may limit participation.</p> <p>As per CVC guidelines, such restrictive conditions should be avoided. We therefore request removal of these rigid location-specific details.</p> <p>Proposed Amendment of Clause</p> <p>The clause may kindly be amended as follows:</p> <p>“Network Infrastructure (Switches / Router / SD-WAN / Wireless Modems / 4G–5G VPN Modems including passive components, etc.)”</p> <p>This amendment will encourage wider participation, better competition, and ensure that bidders with</p>	M/s Hughes communications India Pvt Ltd	<p>The request is accepted. The ammended clause is as follows:</p> <p>The Bidder / SI in the last Seven years (as on date of Submission of bid) must have executed similar project.</p> <p>Similar project means: Supply, Installation & Configuration of Network Infrastructure (Switches / Router / SD-WAN / 4G–5G VPN Modems including passive components, etc.) for min. 75 Location in single Work Order</p>

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16	36	Section III - Evaluation and Qualification Criteria 4 Certifications & Registrations	4.1 Certifications	1. Bidder / SI must have following certifications: ISO 9001, ISO 27001, ISO/IEC 20000, CMMi 3 or above	With reference to the tender eligibility criteria regarding certifications for the System Integrator (SI), we request that the clause be amended for better clarity and wider participation: ISO 9001:2015 Certification ISO 9001:2015 is a globally recognized Quality Management System certification. It is valid and accepted across Government, PSU, and large enterprise projects in India and internationally as proof of quality processes. Proposed Amendment of Clause The clause may kindly be amended as follows: “The Bidder / SI must have the following certifications: ISO 9001:2015, ISO 27001, ISO/IEC 20000, CMMi Level 3 or above.” This amendment will ensure that the tender conditions remain compliant with international standards, while allowing wider participation from competent and certified System Integrators. We request your kind consideration and amendment	M/s Hughes communications India Pvt Ltd	The request can not be accepted. Hence tender clause prevails.
17	71	APPENDIX 9. TECHNICAL SPECIFICATIONS OF AWS & FLS	SITC of Connectivity 1 (V-SAT or Equivalent)	NA- additional	We request the inclusion of the following point in the VSAT specification: The bidder must have its own shared baseband hub infrastructure for the HTS Ku band to provide services. Providing VSAT bandwidth services through the hub of another service provider (VNO) is not allowed. Note: Bidders must submit a self-declaration on their official letterhead, duly signed and stamped by a competent authority.	M/s Hughes communications India Pvt Ltd	The proposed system will be utilised for emergency scenarios. Single beam bandwidth is not advisable as the proposed system shall be able to pool bandwidth from other beams as well if needed in order to achieve the SLAs mentioned in tender document. The estimation for the subject work is based on KU pooled bandwidth. Hence, the request can not be accepted.
18	71	APPENDIX 9. TECHNICAL SPECIFICATIONS OF AWS & FLS	SITC of Connectivity 1 (V-SAT or Equivalent)	NA-additional	We request the inclusion of the following point in the VSAT specification: 2. The bidder must provide satellite services using Indian satellites only. Note: Bidders must submit a self-declaration on their official letterhead, duly signed and stamped by a competent authority, clearly mentioning the name of the satellite.	M/s Hughes communications India Pvt Ltd	Prospective Bidders / SI shall submit a self-declaration on their official letterhead, duly signed and stamped by a competent authority, clearly mentioning that the VSAT services for subject work will be provided through Govt of India (ISRO/Inspace/WPC) approved satellites only.

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19	71	APPENDIX 9. TECHNICAL SPECIFICATIONS OF AWS & FLS	SITC of Connectivity 1 (V-SAT or Equivalent)	NA-additional	We request the inclusion of the following point in the VSAT specification: 3. The services must be offered on an HTS (High Throughput Satellite). Note: A compliance certificate from ISRO/NSIL must be provided, confirming that the satellite used by the bidder for the offered services is an HTS satellite.	M/s Hughes communications India Pvt Ltd	The proposed system will be utilised for emergency scenarios. Single beam bandwidth is not advisable as the proposed system shall be able to pool bandwidth from other beams as well if needed in order to achieve the SLAs mentioned in tender document. The estimation for the subject work is based on KU pooled bandwidth. Hence, the request can not be accepted.
20	75	Technical specifications of Connectivity	NA	Not available for connectivity 1	We observed that in the tender, the Technical Specification for Main Connectivity 1– VSAT has not been mentioned. We kindly request you to incorporate the following point under the connectivity requirements for better clarity and completeness:	M/s Hughes communications India Pvt Ltd	Minimum Technical Specifications for SITC of Connectivity 1 (V-SAT or Equivalent) in addition to the technical specifications mentioned in Appendix 9 of tender document are attached separately at the end of this document.
				We request to add the following technical specifications for Connectivity 1 – VSAT under the tender		M/s Hughes communications India Pvt Ltd	Minimum Technical Specifications for SITC of Connectivity 1 (V-SAT or Equivalent) in addition to the technical specifications mentioned in Appendix 9 of tender document are attached separately at the end of this document.
				Technical Specifications BUC			
				Specification	Details		
				RF Frequency	12.75 to 13.25 GHz		
				IF Frequency	950 to 1,450 MHz		
				Output Power	Min. 2W		
				Linear Gain	59 dB nom., 53 dB min.		
				Power Requirement	Through Satelliten Modem		
				Temperature Range	Operating: -40 to +60 °C		
				Technical Specifications LNB			
				Specification	Details		
				RF Frequency	10.7 to 12.75 GHz		
				Gain	48 dB Min.		
				Power Requirement	Through Satelliten Modem		
				Temperature Range	Operating: -40 to +60 °C		
				Technical Specifications Antenna			
				Specification	Details		
				Reflector Size	1.2 Mtr.		
				Operating Frequency	Tx:- 12.75-13.50 GHz Rx:- 10.70-11.70 GHz		
				Polarization	Linear Orthogonal		
				Sense	Orientable		
				VSWR	Tx:- 1.28:1 Rx:- 1.35:1		
				Mid Band Gain (±0.5 dB)	Tx:- 43.2dbi Rx:- 41.1dbi		
				Side lobe Envelope	ITU 580-6		
				Antenna Noise Temperature	42°K @30°EL		
				Antenna Cross Polarization	On axis (db) 30db		
				Feed Interface Port	Tx : WR75 or equivalent Rx:- WR75 or equivalent		
				Technical Specifications Modem			
				Specification	Details		
				Forward Channel	DVB-S2X with Adaptive Coding and Modulation (ACM)		
				Modulation - Forward Channel	QPSK, 8PSK, 16APSK, 32APSK, 64APSK		
				Forward Channel - Symbol rate	Up to 235 Msps		
		Return Channel	MF-TDMA				

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				Modulation - Return Channel	QPSK, 8PSK, or 16APSK		
				Return Channel - Symbol rate	Up to 12 Msps		
				LAN Interface	Min. 4 LAN ports		
21	NA	NA	NA	Addition request for existing DMR system Integration which is Emergency communication system at the time disaster	Request for Addition in Tender Specifications We request to add the following point in the tender specifications: Addition Request: Integration of Hotline System with the Existing Radio Communication System Integration of the Existing DMR Radio Communication System with the Proposed Solution This will ensure that the system can be effectively used as an Emergency Communication Network during disaster and other critical situations, thereby providing reliable, secure, and uninterrupted communication for command-and-control operations. Note: The bidder should have a valid DPL (Dealership Partner License / Department of Telecommunications License) to execute the work.	M/s Hughes communications India Pvt Ltd	The prospective bidders / SI shall note that, it will be successful bidder / SI responsibility to integrate existing DMR system with the proposed solution (the scope includes the communication between DMR set & IP phones being installed under subject work). The prospective bidders / SI are advised to visit Disaster Management Department to study the existing DMR set up with prior permission of Chief Officer (DMD).
22	35	Section III - Evaluation and Qualification Criteria 2. Financial Situation	2.2 Average Annual Turnover from System Integration	The bidder/SI should have minimum average annual turnover of 176 Crores, from system integration contracts in the last three (3) years	Since the overall project budget is fixed, and as per CVC guidelines, the Annual Turnover criteria should normally be linked to the estimated project cost and not exceed the project, we request you to kindly amend the Annual Turnover criteria in line with the project budget. This amendment will help the department to get more competitive bids and encourage wider bidder participation, thereby ensuring better value for the project	M/s Sheetal Wireless Technologies Pvt Ltd	The request can not be accepted as the financial aspects of this tender document are as per MEITY guidelines. Hence, the tender clause prevails.
23	35	Section III - Evaluation and Qualification Criteria 3 Experience	3.2.1 Specific Experience	The bidder/SI should have experience of "Supply, installation, testing & commissioning (SITC) of IT Infrastructure including Network components, optical fibre components in System Implementation contracts" in the last Seven years. <input type="checkbox"/> One Project of minimum contract value of 28.16 Crores or <input type="checkbox"/> Two Projects, each of minimum contract value of 21.10 Crores or <input type="checkbox"/> Three Projects, each of minimum contract value of 14.08 Crores	We Request you amend the is clause as below One Project of minimum contract value of ₹21 Cr (\geq 50% of project cost), or Two Projects, each of minimum contract value of ₹10.5 Cr (\geq 25% of project cost), or Three Projects, each of minimum contract value of ₹7 Cr (\geq 20% of project cost). This will encourage maximum bidder participation, resulting in more competitive bids and better value for the department. We kindly request your consideration for this amendment.	M/s Sheetal Wireless Technologies Pvt Ltd	The request can not be accepted as the financial aspects of this tender document are as per MEITY guidelines. Hence, the tender clause prevails.

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24	35	Section III - Evaluation and Qualification Criteria 3 .Experience	3.2.2 Project Cost Experience	The Bidder / SI in the last Seven years (as on date of Submission of bid) must have executed similar project. Similar project means: Supply, Installation & Configuration of Network Infrastructure (Switches/Router/SDWAN including passive components etc.) for min. 75 Location in single Work Order.	With reference to the tender document, we respectfully submit the following request for amendment in the clause related to Network Infrastructure experience: Addition of Wireless Technology Experience Considering that V-SAT, 4G/5G VPN modems and wireless technologies are prime components of this project, we request that wireless network experience also be included in the eligibility criteria. This will ensure participation of bidders with relevant expertise in next-generation communication technologies. Removal of Location-Specific Quantity Restrictions The current requirement specifies locations/quantities in a very restrictive manner, which may limit participation. As per CVC guidelines, such restrictive conditions should be avoided. We therefore request removal of these rigid location-specific details. Proposed Amendment of Clause The clause may kindly be amended as follows: “Network Infrastructure (Switches / Router / SD-WAN / Wireless Modems / 4G–5G VPN Modems including passive components, etc.)” This amendment will encourage wider participation, better competition, and ensure that bidders with	M/s Sheetal Wireless Technologies Pvt Ltd	The request is accepted. The ammended clause is as follows: The Bidder / SI in the last Seven years (as on date of Submission of bid) must have executed similar project. Similar project means: Supply, Installation & Configuration of Network Infrastructure (Switches / Router / SD-WAN / 4G–5G VPN Modems including passive components, etc.) for min. 75 Location in single Work Order
25	36	Section III - Evaluation and Qualification Criteria 4 Certifications & Registrations	4.1 Certifications	1. Bidder / SI must have following certifications: ISO 9001, ISO 27001, ISO/IEC 20000, CMMi 3 or above	With reference to the tender eligibility criteria regarding certifications for the System Integrator (SI), we request that the clause be amended for better clarity and wider participation: ISO 9001:2015 Certification ISO 9001:2015 is a globally recognized Quality Management System certification. It is valid and accepted across Government, PSU, and large enterprise projects in India and internationally as proof of quality processes. Proposed Amendment of Clause The clause may kindly be amended as follows: “The Bidder / SI must have the following certifications: ISO 9001:2015, ISO 27001,ISO/IEC 20000,/CMMi Level 3 or above.” This amendment will ensure that the tender conditions remain compliant with international standards, while allowing wider participation from competent and certified System Integrators. We request your kind consideration and amendment	M/s Sheetal Wireless Technologies Pvt Ltd	The request can not be accepted. Hence tender clause prevails.

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26	71	APPENDIX 9. TECHNICAL SPECIFICATIONS OF AWS & FLS	SITC of Connectivity 1 (V-SAT or Equivalent)	NA- additional	We request the inclusion of the following point in the VSAT specification: The bidder must have its own shared baseband hub infrastructure for the HTS Ku band to provide services. Providing VSAT bandwidth services through the hub of another service provider (VNO) is not allowed. Note: Bidders must submit a self-declaration on their official letterhead, duly signed and stamped by a competent authority.	M/s Sheetal Wireless Technologies Pvt Ltd	The proposed system will be utilised for emergency scenarios. Single beam bandwidth is not advisable as the proposed system shall be able to pool bandwidth from other beams as well if needed in order to achieve the SLAs mentioned in tender document. The estimation for the subject work is based on KU pooled bandwidth. Hence, the request can not be accepted.	
27	71	APPENDIX 9. TECHNICAL SPECIFICATIONS OF AWS & FLS	SITC of Connectivity 1 (V-SAT or Equivalent)	NA-additional	We request the inclusion of the following point in the VSAT specification: 2. The bidder must provide satellite services using Indian satellites only. Note: Bidders must submit a self-declaration on their official letterhead, duly signed and stamped by a competent authority, clearly mentioning the name of the satellite.	M/s Sheetal Wireless Technologies Pvt Ltd	Prospective Bidders / SI shall submit a self-declaration on their official letterhead, duly signed and stamped by a competent authority, clearly mentioning that the VSAT services for subject work will be provided through Govt of India (ISRO/Inspace/WPC) approved satellites only.	
28	71	APPENDIX 9. TECHNICAL SPECIFICATIONS OF AWS & FLS	SITC of Connectivity 1 (V-SAT or Equivalent)	NA-additional	We request the inclusion of the following point in the VSAT specification: 3. The services must be offered on an HTS (High Throughput Satellite). Note: A compliance certificate from ISRO/NSIL must be provided, confirming that the satellite used by the bidder for the offered services is an HTS satellite.	M/s Sheetal Wireless Technologies Pvt Ltd	The proposed system will be utilised for emergency scenarios. Single beam bandwidth is not advisable as the proposed system shall be able to pool bandwidth from other beams as well if needed in order to achieve the SLAs mentioned in tender document. The estimation for the subject work is based on KU pooled bandwidth. Hence, the request can not be accepted.	
29	75	Technical specifications of Connectivity	NA	Not available for connectivity 1	We observed that in the tender, the Technical Specification for Main Connectivity 1– VSAT has not been mentioned. We kindly request you to incorporate the following point under the connectivity requirements for better clarity and completeness:	M/s Sheetal Wireless Technologies Pvt Ltd	Minimum Technical Specifications for SITC of Connectivity 1 (V-SAT or Equivalent) in addition to the technical specifications mentioned in Appendix 9 of tender document are attached separately at the end of this document.	
		Technical specifications of Connectivity	We request to add the following technical specifications for Connectivity 1 – VSAT under the tender				M/s Sheetal Wireless Technologies Pvt Ltd	Minimum Technical Specifications for SITC of Connectivity 1 (V-SAT or Equivalent) in addition to the technical specifications mentioned in Appendix 9 of tender document are attached separately at the end of this document.
			Technical Specifications BUC					
			Specification		Details			
			RF Frequency		12.75 to 13.25 GHz			
			IF Frequency		950 to 1,450 MHz			
			Output Power		Min. 2W			
			Linear Gain		59 dB nom., 53 dB min.			
			Power Requirement		Through Satelliten Modem			
			Temperature Range		Operating: -40 to +60 °C			
			Technical Specifications LNB					
			Specification		Details			
			RF Frequency		10.7 to 12.75 GHz			
			Gain		48 dB Min.			
			Power Requirement		Through Satelliten Modem			
			Temperature Range		Operating: -40 to +60 °C			
			Technical Specifications Antenna					
			Specification		Details			
			Reflector Size		1.2 Mtr.			
Operating Frequency			Tx:- 12.75-13.50 GHz					

Sr.No	Page No	Section No	Point No	Existing Clause	Clarification/Query of Bidder	Prospective Bidder / SI	Remarks / Clarification by BMC
					Rx:- 10.70-11.70 GHz		
				Polarization	Linear Orthogonal		
				Sense	Orientable		
				VSWR	Tx:- 1.28:1		
					Rx:- 1.35:1		
				Mid Band Gain (±0.5 dB)	Tx:- 43.2dbi		
					Rx:- 41.1dbi		
				Side lobe Envelope	ITU 580-6		
				Antenna Noise Temperature	42°K @30°EL		
				Antenna Cross Polarization	On axis (db) 30db		
				Feed Interface Port	Tx : WR75 or equivalent		
					Rx:- WR75 or equivalent		
				Technical Specifications Modem			
				Specification	Details		
				Forward Channel	DVB-S2X with Adaptive Coding and Modulation (ACM)		
				Modulation - Forward Channel	QPSK, 8PSK, 16APSK, 32APSK, 64APSK		
				Forward Channel - Symbol rate	Up to 235 Msps		
				Return Channel	MF-TDMA		
				Modulation - Return Channel	QPSK, 8PSK, or 16APSK		
				Return Channel - Symbol rate	Up to 12 Msps		
				LAN Interface	Min. 4 LAN ports		
30	NA	NA	NA	Addition request for existing DMR system Integration which is Emergency communication system at the time disaster	Request for Addition in Tender Specifications We request to add the following point in the tender specifications: Addition Request: Integration of Hotline System with the Existing Radio Communication System Integration of the Existing DMR Radio Communication System with the Proposed Solution This will ensure that the system can be effectively used as an Emergency Communication Network during disaster and other critical situations, thereby providing reliable, secure, and uninterrupted communication for command-and-control operations. Note: The bidder should have a valid DPL (Dealership Partner License / Department of Telecommunications License) to execute the work.	M/s Sheetal Wireless Technologies Pvt Ltd	The prospective bidders / SI shall note that, it will be successful bidder / SI responsibility to integrate existing DMR system with the proposed solution (the scope includes the communication between DMR set & IP phones being installed under subject work). The prospective bidders / SI are advised to visit Disaster Management Department to study the existing DMR set up with prior permission of Chief Officer (DMD).

Note: With reference to the e-Mail received from Manager (IT Department), All the queries raised by bidders are related to prequalification criteria and VSAT requirements mentioned in RFP. Hence a decision is to be taken at user department level only.

Sd/-
Chief Officer, (DMP & CCRS)

Sd/-
CA (Finance)

Sd/-
DMC (PH)

SECURITY DEPOSIT, ADDITIONAL SECURITY DEPOSIT AND PERFORMANCE
GUARANTEE

A. Security Deposit

The security deposit shall mean and comprise of

- I. Contract/ Security Deposit ~~and~~
- II. ~~**Retention Money**—The contractor shall pay the retention money an amount equal to five (5) percent of the Contract Sum which will be recovered from the contractors every bill i.e. interim / running / final bill. The clause of retention money will not be applicable to M. & E. Department.~~
- III. **Contract/Security Deposit – The successful tender, here after referred to as the contractor shall pay an amount equal to Five percent (5%) of the contract sum shall be paid within thirty days from the date of issue of letter of acceptance. Contract/Security deposit can be paid in the form of an electronically issued irrevocable bank guarantee bond of any Schedule bank or in the prescribed form given in Annexure. Also submit the 0.5% stamp duty on the value of the bank guarantee.**

B. Additional Security Deposit

The **additional security deposit** will be applicable when a rebate of more than of 12 % at the rate of with no maximum limit. The ASD is calculated as follows:

Sr No	Rebate quoted by the contractor	ASD applicable
1	Up to 12% rebate	No ASD
2	12.01% to 20% rebate	1% of estimated cost for each percentage & part thereof above 12% rebate
3	20.01% rebate & above	8% + 2% extra of estimated cost for each percentage & part thereof over & above 12% rebate

Additional Security Deposit (ASD) in the form of DD in CFC of BMC within 15 working days from the receipt of the letter of acceptance & submit the copy of the receipt of the same to this office. Failing to this, entire EMD amount will be forfeited & your company will be debar from BMC for next 2 years, Also any other companies

in which you hold the position of Director/ Partner will be debar from BMC for next 2 years.

C. Performance Guarantee

The successful tender, here after referred to as the contractor shall pay in the form of “Performance Guarantee” at different rates for different slabs as stated below:

Offer	PG applicable %
For premium, at par and rebate 0 to 12%	PG= 0.92% x contract sum applicable for rebate of 12%
For rebate of 12.01%	P.G. = {0.92% x contract sum applicable for rebate of 12%} +(X) x contract sum where X= percentage rebate quoted more than 12%

Note: Contract sum shall mean amount after application of rebate/premium as quoted by the contractor with contingencies only and excluding price variation.

The PG shall be paid in one the following forms.

- i. Cash (In case guarantee amount is less than Rs.10,000/-)
- ii. Demand Draft (In case guarantee amount is less than Rs.1,00,000/-)
- iii. Government securities
- iv. Fixed Deposit Receipts (FDR) of a Schedule Bank.
- v. An electronically issued irrevocable bank guarantee bond of any Schedule bank or in the prescribed form given in Annexure.

Performance Guarantee is applicable over and above the clause of Security Deposit. Performance Guarantee will have to be paid & shall be valid till the defect liability period or finalization of final bill whichever is later.

If Performance Guarantee is paid in the form of an electronically issued irrevocable bank guarantee bond of any Schedule bank or in the prescribed form given in Annexure. Also submit the 0.5% stamp duty on the value of the bank guarantee.

This deposit will be allowed in the form of I to V as mentioned above and shall be paid within 15 days after receipt of Letter of Acceptance.

Note: Following exceptions shall be adopted for ‘Demolition Tenders’:

- Irrespective of the offer (Rebate/ at par/ premium), ASD shall be differed and only PG of 10% of contract sum be taken from the successful bidder on award of contract only.
- BMC departments shall ensure to incorporate specific condition regarding above in bid document and e-tender notice.

D) Refund of Security Deposit

I. Refund of Contract Deposit

The Contract Deposit shall be released within 30 days after completion of 3rd year of DLP (in case of 5 years DLP) and after issue of 'Defect Liability Certificate' (in case of 1 or 2 or 3 years DLP) subject to no recoveries are pending against the said work, provided that the Engineer is satisfied that there is no demand outstanding against the Contractor. No claim shall be made against the Balance Contract Deposit after the issue of Defects Liability Certificate.

II. Refund of Retention Money

One-half (50%) of the Retention Money shall be released within 30 days of issue of 'Certificate of Completion' with respect to the whole of the Works. In the event the Engineer issues a Taking-over Certificate for a section or part of the Permanent Works, only such proposition thereof as the Engineer determines (having regard to the relative value of such section or part of the Works) shall be considered by the Engineer for payment to the Contractor.

The balance Retention Money shall be released within 30 days after completion of 3rd year of DLP (in case of 5 years DLP) and after issue of 'Defect Liability Certificate' (in case of 1 or 2 or 3 years DLP) provided that the Engineer is satisfied that there is no demand outstanding against the Contractor. In the event of different Defects Liability Periods have been specified or become applicable to different sections or parts of the Permanent Works, the said moneys will be released within 30 days on expiration of the latest of such Defects Liability Periods.

Payment of the above mentioned 50% is exclusive of the amounts to be withheld as stated in and that amount shall be paid as per condition stated therein.

III. Refund of Additional Security Deposit

The additional security deposit shall be released within 30 days of issue of 'Certificate of Completion' with respect to the whole of the Works. In the event the Engineer issues a Taking-over Certificate for a section or part of the Permanent Works, only such proposition thereof as the Engineer determines (having regard to the relative value of such section or part of the Works) shall be considered by the Engineer for payment to the Contractor.

IV. Refund of Performance Guarantee

The Deposit on account of performance guarantee shall be released within 30 days of completion of Defects Liability Certificate subject finalization of final bill whichever is later and no recoveries are pending against the said work, provided that the Engineer is satisfied that there is no demand outstanding against the Contractor.

Summary of time of Refund of deposit is tabulated as follows:

a. Time of Refund for works having 5 years DLP

Deposits refunded after completion	After 3 yrs of DLP	After Completion of DLP
ASD + 50% of RM	CD+50% of RM	PG

b. Time of Refund for works having 1 or 2 or 3 years DLP

Deposits refunded after completion	After Completion of DLP
ASD + 50% of RM	CD+50% of RM+PG

*Note:

- It shall be clearly mentioned that the BG shall be applicable for individual work/contract and clubbing of various contracts of the said contractor will not be allowed. In case of obtaining Bank Guarantee, it is necessary to mention that the same shall be valid further 6 months from the completion of defect liability period/ warranty period.
- It shall be the responsibility of the bidder to keep the submitted B.G. "VALID" for the stipulated time period in the tender & in case of its expiry it will attract penalization.
- Bank Guarantee should be issued by way of General Undertaking and Guarantee issued on behalf of the Contractor by any of the Nationalized or Scheduled banks or branches of foreign banks operating under Reserve Bank of India regulations located in Mumbai up to Virar & Kalyan. List of approved Banks is appended at the end of Instructions to Bidders

(ITB). The Bank Guarantee issued by branches of approved Banks beyond Kalyan and Virar can be accepted only if the said Bank Guarantee is countersigned by the Manager of a Regional Branch of the same bank within the Mumbai City Limit categorically endorsing thereon that the said Bank Guarantee is binding on the endorsing Branch of the Bank or the Bank itself within Mumbai Limits and is liable to be enforced against the said Branch of the Bank or the bank itself in case of default by the Contractors furnishing the Bank Guarantee. The Bank Guarantee shall be renewed as and when required and/or directed from time to time until the Contractor has executed and completed the works and remedied any defects therein.

Additional VSAT or Equivalent Specifications

In addition to technical specifications mentioned under “Item1: SITC of Connectivity 1” on Pg No 71 of Bid published for subject work, following technical specifications are being added

Security features: -

The proposed VSAT shall provide the highest level of transmission security, supporting X.509 terminal authentication and DES, 3DES & AES link layer encryption to protect all user traffic. It shall have ACL Firewall & X.509 Terminal Authentication.

Minimum Technical Specifications BUC Details

- 1) RF Frequency -13.75 to 14.5 GHz
- 2) BUC Output Power
 - (i) DC & DR - Minimum 8 Watts
 - (ii) Hotline Sites - Minimum 2 Watts
- 3) Linear Gain - As per the wattage
- 4) Operating Temperature: -40 to +55 °C

Minimum Technical Specifications LNB Details

- 1) RF Frequency -10.95 to 12.75 GHz
- 2) DC Power requirement -From IDU
- 3) Operating Temperature: -40 to +55 °C

Minimum Technical Specifications Antenna Details

- 1) Ku Antenna Size
 - a) Hotline Locations - Minimum 1.2 meters
 - b) DC & DR - Minimum 1.8 meters
- 2) Mount Type - Non-Penetrating mount, Elevation over Azimuth
- 3) Type of Feed - Offset feed
- 4) Transmit frequency: 13.75 - 14.50 GHz
- 5) Receive frequency: 10.70 - 12.75 GHz
- 6) Polarization - Linear Orthogonal
- 7) Tx Gain (Mid Band) - 43.20 dBi
- 8) Rx Gain (Mid Band) - 41.10 dBi
- 9) Wind condition: Operational – 80 Kmph, Survival – 200 Kmph

Minimum Technical Specifications Modem Details

- 1) Forward Channel -DVB-S2 with Adaptive Coding and Modulation (ACM)
- 2) Modulation - QPSK, 8PSK, 16APSK, 32APSK
- 3) Symbol rate - Up to 67 Msps
- 4) Return Channel - MFTDMA
- 5) Modulation - Return Channel - BPSK, QPSK, 8PSK, 16QAM
- 6) Symbol rate - Up to 6 Msps
- 7) Data Interfaces - Ethernet 10/100/1000BaseT RJ-45, 802.1Q VLAN

All prospective Bidders / SI shall note that following condition mentioned in “Item1: SITC of Connectivity 1” is **deleted**:

“The Solution provider as a capability should have Carrier-grade DDoS Mitigation System with Real-time traffic scrubbing and encryption.”

Additional MPLS or Equivalent Specifications

In addition to technical specifications mentioned under “Item 3: SITC of Connectivity 3” on Pg No 75 of Bid published for subject work, following technical specifications are being added:

“The Solution provider as a capability should have Carrier-grade DDoS Mitigation System with Real-time traffic scrubbing and encryption.”

*******End of the Document*******