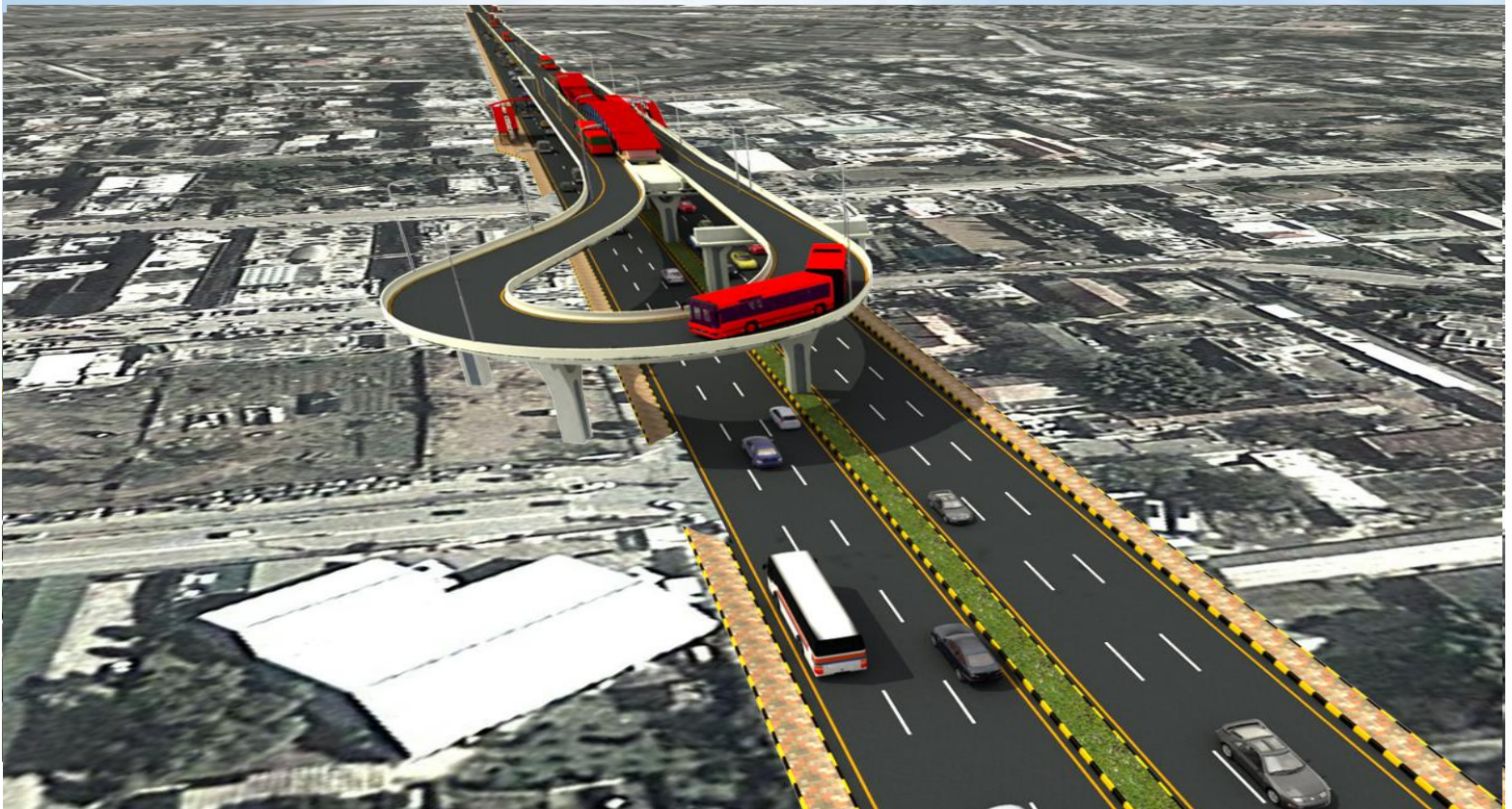


# Addendum No. 1 to Tender Document

**PROVISION, COMMISSIONING, INSTALLATION, CALIBRATION,  
INTEGRATION, TESTING, AND EXECUTION OF IT SYSTEMS (CCTV  
SURVEILLANCE, FIBER OPTIC CONNECTIVITY AND VIDEO WALL)  
ON METROBUS CORRIDOR IN RAWALPINDI-ISLAMABAD  
(SADDAR TO PM SECRETARIAT)**



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# Addendum No.1 to the Tender Document

Due to some clarifications required in the RFP document, the following addendum is hereby issued; which shall form a part and parcel of the original document titled

**"Provision, Commissioning, Installation, Calibration, Integration, Testing, and Execution of IT SYSTEMS (CCTV Surveillance, Fiber Optic Connectivity and Video Wall) ON METROBUS CORRIDOR IN RAWALPINDI-ISLAMABAD (SADDAR TO PM SECRETARIAT)"**

, issued and uploaded on June 27, 2014. The contents of this addendum shall supersede/replace pages 2, 15, 16, 23, 24, 25, 28, 34, 37, 43, 52, 53, 56, 58, 59, 64, 72, 89, 91, 97, 105, 107, 110, 112, 114 and 129 of the original RFP document, and shall be read as part of the RFP document uploaded on the following websites:

[www.pma.punjab.gov.pk](http://www.pma.punjab.gov.pk)

[www.ppra.punjab.gov.pk](http://www.ppra.punjab.gov.pk)

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### **7.2.2 IP Telephony and Public Address System**

- a. Integrated Communication Platform of Voice Communication System to provide User Interface for IP telephony and Public Address system communications on Stations from station to Command & Control Center and vis-à-vis.

### **7.2.3 Data center**

- a. Furnish and install Data Centre equipment and requisite hardware (computing and switching).
- b. Deployment and Installation of hardware including servers, storage, racks etc.
- c. Detailed solution architecture
- d. Bidders are required to provide computing/switching as per proposed solution

### **7.2.4 Network**

- a. Providing connectivity through reliable media (fiber 10G GPON) from MBS Stations, Corridor to DC to Command and Control Center; Command and Control Centre to DC; DC to Command and Control Center.
- b. Detail network diagram with network architecture
- c. Provide all network components include all active and passive equipment.

### **7.2.5 Command & Control Centre hardware**

- a. Video Wall with allied accessories, Data center, LAN, switch/router, workstations, equipment etc.
- b. Electrical design and requirement/provision of Network cabling etc.

### **7.2.6 Integration**

- a. Provisioning and Integration of all IT System on Turnkey as per industry standards.

### **7.2.7 Training**

- a. Essential training to the operational staff of Purchaser shall be provided locally.

The bidders are required to submit a comprehensive detailed system and network architectures of proposed solution as well as the detailed specifications of proposed hardware components.

### **7.3 Future Expansion Plans**

Once, the IT Systems solution is successfully adopted for current phase of Metrobus, there are plans to roll out the solution for later phases of Metrobus, and eventually local transport Operations may be included as well.

## **8. Contract type and duration**

Contract period is (06) six years, extendable based on needs, compliance to defined Service Level Agreement (SLA), satisfactory audit reports, and compliance to other requirements stated in this Tender Document, and formal contract.

## **9. Services Required**

Contractual obligations of the successful bidder's (IT Systems Service Provider's roles and Responsibilities):

### **IT Systems Solution Deployment and onsite technical support:**

1. Provision, Install, configure, customize, deploy, thoroughly test, maintain and operate all IT Systems components - including all related equipment and software necessary for the smooth running of the system, in accordance with provisions of this tender document, good industry practices, applicable laws, and technical specifications of components stated in this document.
2. Provision, Install, maintain and operate a robust, scalable, secure, and efficient data communications network connecting PMA stations to the datacenter/hosting site as well as the central PMA control center.
3. Deploy suitably skilled personnel (dedicated team) for configuration/customization, installation, and prompt and efficient technical support/maintenance of all IT Systems components.
4. Adequate spare parts must be in place, in order to ensure uptime defined in the Service Level Agreements. Cost to be borne by service provider/successful bidder.
5. Submit detailed design, specifications, documentation, and manuals (also in softcopy) of related IT Systems components being implemented - for approval.

a. Installation of cameras

- Cameras need to be deployed to monitor Stations and corridor.
- Bidder needs to identify the type of the camera i.e. PTZ, fixed etc. based on the location.
- Any work related to installation of camera like, customization, cabling etc. would be part of bidder's scope of work.

b. Set up of Command and Control Centre

- Command and Control Center to be set up at the specified location.
- Furnish 24/7 Communication and Information services at the command & control center.
- Electrical and network design and requirements for cabling.
- Any work related to installation of screens, making of video wall, cabling, networking, installation of workstation is part of bidder's scope of work.

12.6.2. Public Address and IP Telephony System

- Solution incorporates a Public Address System and IP Telephony System which will allow PMA Staff, Operators to accomplish all their voice communications, broadcast voice messages at stations and command & control center.

12.6.3. Data center (DC)

a. Co-locate IT System according to best practices (Data center standards Tier 3 compliant (bidder will provide undertaking that provisioned datacenter is Tier 3 compliant)).

- Bidder is required to secure Co-located IT Systems at Tier3 compliant DC at the appropriate location.
- DC to be co-located and connected with Command & Control Center.

b. Including:

- Dynamic and efficient precision cooling system should be available for DC



- Precision Cooling System for DC should be available with no single point of failure, best of breed products, maximum flexibility, scalability and accessibility for maintenance.
  - Electrical and Mechanical actual load consumption shall be considered for design of power system
  - Floor plan and flooring would also be part of bidder's scope of work.
- c. Provisioning and installation of hardware including servers, storage, racks etc.
- Bidder is will supply all the hardware required for the data center including servers, monitors, storage, racks etc. The proposed hardware must be scalable.
  - Operating systems, Applications, Real time Network Monitoring System and all Licensing required for commissioning of the hardware shall also be provided by the bidder.
  - Bidder shall also set up monitoring mechanism for the DC with the required hardware/software.
  - Bidder shall also provide Anti-Virus, DMS, and VPN etc.

#### 12.6. 4. Network

- a. Providing fiber optic connectivity on GPON Network from Station, Corridor to DC;; DC to Command and Control Center.
- The project includes provision of optic fiber network for last mile connectivity, as well as final system design, documenting all system components, preparation of input like messages, dynamic sign contents, response/ action plans, etc. according to the Client's requirements, coordination with the PMA and maintenance by providing technical support.
  - Bidder will provide primary connectivity between the locations. It is expected that there would be minimum connectivity failure (99.5% Uptime) at any point of time.
- b. Provide all network components including active and passive components
- In addition to the connectivity, bidder shall provide all network components such as routers, switches, cable at all the required locations.

#### 12.6.5. Office hardware

a. Supply and install office LAN, office switch/ router, workstations for Command and Control Center etc.

- For the proper functioning of the IT system, bidder is required to propose certain office hardware based on requirements.
- Hardware shall be commissioned by the bidder and also maintained by the bidder during the maintenance period.

#### 12.6.6. Integration

Integration services includes complete integration on Turnkey basis of all IT systems having following components:

- Command and Control Center
- Video Surveillance
- IP Telephony and Public Address System
- Location/Station, Corridor
- Video Wall
- Data Center

**Note: Major components and their quantities are listed section(76); Bidder must provision any other/more equipment required to integrate the system and to make it functional.**

#### 12.6.7. Training

- a. The scope of the training shall be to train the skills, knowledge, behaviors, technology functionality, processes of the new roles for, but not limited to **Operators and supervisors**

#### 12.6.8. Maintenance



14.1.10 The IT System must have provision of integration with any other systems in future.

#### **14.2 Networks & Data Connectivity**

14.2.1 Setting up the IT System components on each PMA station, including the data network, so as to ensure timely, un-interrupted transmission of data between IT Systems at stations, corridor and at C&CC& datacenter.

14.2.2 Reliable/redundant network availability onto the stations.

14.2.3 Linking any network equipment etc to UPS, with at least 4 hours of backup power supply.

14.2.4 Usage of automated tools to monitor network performance at every station, access must be provided to stakeholders.

#### **14.3 Station Equipment**

14.3.1 Deployment (and security) Cameras, UPS, cabling for networks, routers/switches/signal boosters, and/or any other component required to run IT System efficiently, adequately, and as per industry standards as well as to ensure compliance to parameters mentioned in the Service Level Agreement. A Data cabin space will be provided on each platform/station where station equipment will be placed.

#### **14.4 Centralized/Back-office systems and reliable hosting**

14.4.1 All transactional data will remain property of the purchaser and may not be shared with anyone without written consent of the Purchaser.

14.4.2 Purchaser will have access to all transactional data and audit logs, logged into the system for at least the past twelve months (30 days for CCTV surveillance Record as per defined highest resolution), at all times. And will be provided regular data backups by the contractor for long-term storage and archival purposes on reliable storage media.

#### **14.5 Equipment Installation/Maintenance and Software Support**

14.5.1 Installation, maintenance, and operations of all equipment as listed in relevant sections of this tender document.

14.5.2 Continuous support of all software and hardware components associated with proposed IT System - via dedicated support staff accessible via help desk, all services must be provided based on the service-level parameters defined in this document.

#### **14.6 Human Resources**

The successful bidder must employ adequate, well-trained staff to perform all duties and responsibilities stated in this tender document – including all roles/duties to be performed at the stations, corridor at the central datacenter, and to support PMA authorized staff on the complete solution.

### **15. Tender/Bidder Eligibility**

**15.1** An eligible Tenderer/Bidder is a Tenderer/Bidder who:

15.1.1 is a provider of Services and Equipment as outlined in the document

15.1.2 Services can only be supplied / sourced / routed from “origin” in “eligible” member countries.

- subject to variation / escalation;
- 21.1.2 Inclusive of all charges up to the delivery point at the Project site in Rawalpindi for IT System related components;
  - 21.1.3 in Pak Rupees (PKR);
  - 21.1.4 Is inclusive of all applicable taxes, duties, levies, insurance, freight, etc., as per Laws of the Government of Pakistan, but shall be exclusive of Sales Tax on Services which shall be added by the Purchaser over and above the quoted amount, as applicable/required under the relevant Tax Laws, to arrive at the Contract Price. Accordingly, the Contract Price shall be subject to adjustments for change in rate of Sales Tax on Services.
  - 21.1.5 If not specifically mention in the Tender, it shall be presumed that the quoted price is as per the above requirements.
  - 21.2** Where no prices are entered against any item(s), the price of that item shall be deemed to have been distributed among the prices of other items, and no separate payment shall be made for that item(s).
  - 21.3** The price hereby quoted by the Bidders would cover the whole scope of services for the contract period.

## **22. Bid/Tender Security**

- 22.1** The Tenderer shall furnish the Tender Security/Bid security as under:
- 22.2** **As part of technical bid envelope in a separate envelop**, failing which will cause rejection of bid.
- 22.3** Bid security should be submitted by the Bidder;
  - 22.3.1 Demand Draft / Pay Order / Bank Guarantee, issued by a scheduled bank operating in Pakistan, in the name of the Client, , as per the format provided in the Tender Document[Annexure-G];
  - 22.3.2 for a sum of PKR ten (10) million;
  - 22.3.3 denominated in Pak Rupees;
  - 22.3.4 have a minimum validity period of **180 days** from the last date for submission of the Tender or until furnishing of the Performance Security, whichever is **earlier**.
- 22.4** The proceeds of the Tender Security shall be payable to the Purchaser, on the occurrence of any / all of the following conditions:
  - 22.4.1 If the Tenderer withdraws the Tender during the period of the Tender validity specified by the Tenderer on the Tender Form; or
  - 22.4.2 If the Tenderer does not accept the corrections of his Total Tender Price; or
  - 22.4.3 If the Tenderer, having been notified of the acceptance of the Tender by the Purchaser during the period of the Tender validity, fails or refuses to furnish the Performance Security, in accordance with the Tender Document.
  - 22.4.4 If the Tenderer fails to provide the performance security in stipulated timeframe, format, amount and currency.
  - 22.4.5 The Tenderer refuses or fails to submit the Performance Security as per agreed timelines, amount and format.

## **29. Rejection & Acceptance of Tender/Bids**

- 29.1** The Procurer / Purchaser shall have the right, at his exclusive discretion, to increase / decrease the quantity of any or all item(s) of services required without any change in unit prices or other terms and conditions, accept a Tender reject any or all tender(s), cancel / annul the Tendering process at any time prior to award of formal Contract, without assigning any reason or any obligation to inform the Tenderer of the grounds for the Procurer's/ Purchaser's action, and without thereby incurring any liability to the Tenderer and the decision of the Purchaser shall be final.
- 29.2** The Tender shall be rejected if it is:
- 29.2.1 substantially non-responsive; or
  - 29.2.2 submitted in other than prescribed forms, annexes, schedules, charts, drawings, documents / by other than specified mode; or
  - 29.2.3 incomplete, un-sealed, un-signed, printed (hand written), partial, conditional, alternative, late; or
  - 29.2.4 subjected to interlineations / cuttings / corrections / erasures / overwriting; or
  - 29.2.5 the Tenderer submits more than one Tenders against; or
  - 29.2.6 the Tenderer refuses to accept the corrected Total Tender Price; or
  - 29.2.7 the Tenderer has conflict of interest with the Purchaser; or
  - 29.2.8 the Tenderer tries to influence the Tender evaluation / Contract award; or
  - 29.2.9 the Tenderer engages in corrupt or fraudulent practices in competing for the Contract award.
  - 29.2.10 there is any discrepancy between bidding documents and bidder's proposal i.e. any non-conformity or inconsistency or informality or irregularity in the submitted bid.
  - 29.2.11 the Tenderer submits any financial conditions as part of its bid which are not in conformity with tender document.
  - 29.2.12 the Tenderer refuses or fails to submit the Performance Security as per agreed timelines, amount, currency and format.

## **30. Acceptance Letter (LOA)**

The Purchaser shall, send the Acceptance Letter (LOA) to the successful Tenderer, prior to the expiry of the validity period of the Tender, which shall constitute a contract, until execution of the formal Contract. However, the Purchaser reserves exclusive rights to cancel the Acceptance letter (LOA) at any time without giving any reason thereof.

## **31. Performance Security**

- 31.1** The successful Tenderer shall furnish Performance Security as under:
- 31.1.1 within ten (10) working days of the receipt of the Acceptance Letter from the Purchaser;
  - 31.1.2 in the form of a Bank Guarantee, issued by a scheduled bank operating in Pakistan, as per the format provided in the Tender Document[Annexure-H];

NOW THEREFORE, the Parties to this Contract agree as follows:

1. The Contractor hereby covenants with the Purchaser to supply the equipment and services, in conformity in all respects with the provisions of the Contract, in consideration of the payments to be made by the Purchaser to the Contractor.
2. The Purchaser hereby covenants with the Contractor to pay the Contractor, the Contract Price or such other sum as may become payable, at the times and in the manner, in conformity in all respects with the provisions of the Contract, in consideration of supply of the Services.
3. The following shall be deemed to form and be read and construct as part of this Contract:
  - a. The Tender Document/RFP
  - b. Bidder's Proposal
  - c. Acceptance Letter (LOA)
  - d. Terms and Conditions of the Contract
  - e. Special Stipulations
  - f. The Technical bid / Specifications
  - g. Tender Form
  - h. Price Schedule
  - i. Affidavit(s)
  - j. Authorized Dealership / Agency Certificate
  - k. Performance Security
  - l. Service Level Agreement (SLA),
  - m. Non-Disclosure Agreement (NDA), if required
  - n. Any Standard Clause acceptable for Purchaser
4. This Contract shall prevail over all other documents. In the event of any discrepancy / inconsistency within the Contract, the above Documents shall prevail in the order listed above.

***Draft Service Level Agreement is elaborated in Annexure-J.***

IN WITNESS whereof the Parties hereto have caused this Contract to be executed in accordance with the laws of **Pakistan** as of the day, month and year first indicated above.

For **[full legal name of the Purchaser]:**

For **[full legal name of the Contractor]:**

Signature

Signature

Name

Name

Witnessed By:

Witnessed By:

**58. Waiver**

Failure of either party to insist upon strict performance of the obligations of the other party, under the Contract, shall in no way be deemed or construed to affect in any way the right of that party to require such performance.

**59. Training**

**58.1** The Contractor shall arrange and undertake a comprehensive training program for the staff nominated by the Purchaser / the Client to ensure that they shall acquire a good working knowledge of supply of such Services to be supplied under the Contract.

**58.2** In case of non-compliance with instructions, non-cooperation or other difficulties experienced by the Contractor with regard to any of these personnel, the Contractor shall apprise the Purchaser / Client and proceed to implement suitable remedial measures after consultation with them.

**60. Standards**

The Goods and the Services supplied under this Contract shall conform to the authoritative latest/leading industry standards and best practices.

**61. Commercial Availability**

The Goods/Equipment/Software/Items and Services supplied under this Contract shall be commercially available at the time of signing of the contract. Commercial availability means that such Goods/Equipment/Software/Items shall have been sold, installed and operationalized in at least one(01) installations globally and comply to open standards as listed in the tender document.

**62. Labeling**

The Goods/Equipment/Software/Items supplied under the Contract, shall be clearly labeled so as to correspond with the delivered documentation, with proper labeling scheme. All equipment, cables, connectors, ports, boxes shall be clearly labeled.

**63. Delivery**

**62.1** The IT Systems setup delivery time is one hundred and sixteen 116 calendar days from the issuance of **Acceptance Letter (LOA)** with complete deployment, commissioning and installation. The Contractor shall deliver the services at Rawalpindi, as specified by The Purchaser/The Client.

**62.2** The Goods/Equipment/Software/Items shall remain at the risk and under the physical custody of The Contractor until the delivery/commissioning in the live environment is completed.

**62.3** The Contractor shall ensure that the Goods/Equipment/Software/Items shall be delivered complete to enable the testing to proceed without interruption. If it shall appear to The Purchaser that the Goods/Equipment/Software/Items have been or are likely to be delayed by reason of incomplete delivery or for any other reasons, he may require the Contractor to dispatch the missing items of the Goods/Equipment/Software/Items or suitable replacements thereof, at the Contractor's expense, to the site of delivery by the fastest available means

including air freight.

- 62.4** The Contractor will deliver all the equipment in the contractor warehouse and intimate the Purchaser to inspect the Goods/Equipment/Software/Items. Purchaser will nominate the inspection team and will issue a certificate. All the expenses related to the warehousing and inspection will be borne by the contractor.

#### **64. Installation and Implementation**

- 64.1** The Contractor shall ensure that the implementation design conforms to an open standard by which new Goods can be added without disruption to existing Goods/Equipment/Software/Items.
- 64.2** The Contractor shall ensure that the implementation is fault tolerant. This is accomplished by supplying a set of programs and procedures that allow the system recovery or roll back when a fault is detected.
- 64.3** The Contractor shall provide all the recent patches and updates for Software Firmware/Hardware, on a reliable media, with proper labeling, during the installation to The Purchaser on free of Charge basis.
- 64.4** The Contractor shall configure the system for high availability and reliability, of hardware as per **Acceptance Letter (LOA)** and specifications given in this Contract.
- 64.5** The Contractor shall submit detailed and complete installation, transition and cutover plan for the new system, installation procedures for the new components specifying equipment checkout, installation constraints, operational cutover, maintenance prior to Client acceptance and if special security and/or access arrangements are required.

#### **65. Maintenance**

All the patches updates as deployed shall be maintained free of charge throughout the project life by the contractor/subcontractor with existing features without any implications on cost. This is to assure that IT Systems will stay operational within the existing scope.

#### **66. Updates**

The Contractor during the contract period shall provide free of charge (FOC) updates for the IT Systems, including but not limited to, any changes required due to operational needs of the Client.

#### **67. Site Preparation**

- 67.1** The Contractor shall be responsible to survey the central site, determine power, air conditioning and floor space requirements etc., identify, for the proposed equipment (if required).
- 67.2** The Purchaser shall facilitate the Contractor in discharge of the above responsibilities and indemnify the Contractor for any delays in making such arrangements. Deployment time mentioned in this Contract will be accordingly adjusted (if required).

#### **68. Power**

The Goods/Equipment/Software/Items supplied under the Contract, unless otherwise specified, shall be capable of operating normally with single phase AC power, within the range of 220-240V, and should be protected from over-voltage, over-heating and out-of-tolerance

**75. Special Stipulations**

<b>SCHEDULE-A, SPECIAL STIPULATIONS</b>	
<b>For ease of Reference, certain special stipulations are as under:</b>	
<b>Tender Security</b>	<p>Tender security should be submitted by the Bidder.</p> <p>The Contractor shall furnish the Tender Security as under:</p> <p>Demand Draft / Pay Order / Bank Guarantee, issued by a scheduled bank operating in Pakistan, in the name of the Client, , as per the format provided in the Tender Document[Annexure-G] or in another format acceptable to the Purchaser; for a sum of PKR ten (10) million; denominated in Pak Rupees;</p> <p>Have a minimum validity period of one hundred and eighty days (180) from the last date for submission of the Tender or until furnishing of the Performance Security, whichever is later</p>
<b>Performance Security</b>	<p>The successful Contractor shall furnish Performance Security as under:</p> <p>within ten (10) working days of the receipt of the Acceptance Letter from the Purchaser;</p> <p>in the form of a Bank Guarantee, issued by a scheduled bank operating in Pakistan, as per the format provided in the Tender Document to the Purchaser;</p> <p>denominated in Pak Rupees;</p> <p>Have a minimum validity period of one year from the date of Award Notification or until the date of expiry of yearly support period.</p> <p>The technically and financially successful tenderer submit a sum equivalent to 10% of the yearly contract value, for a period of one year, on a yearly basis, with an undertaking to renew the Bank Guarantee before the end of each year, one month before the expiry period of the submitted bank guarantee.</p>
<b>Start operation of Services after installation, configuration, deployment, commissioning, testing, and</b>	Fully functional IT Systems setup for 24 stations, corridor and command and control center of PMA <b>within 116 Calendar Days</b> from the issuance of <b>LOA</b> .



## 76. Technical Evaluation Criteria

A point system will be used for technical qualifying for the contractors.

**PASS MARKS:** An eligible bidder, based on conditions listed in Section below, not meeting the 60% pass mark limit will be rejected in Technical evaluation, and its Financial Proposal will be returned to it unopened. All bidders scoring greater than or equal to 60% of the marks will be accepted in technical proposal, and their respective financial bids will be opened as per rules and regulations.

According to the Technical Proposal, the Technical bids will be rated as follows. Bidders may fill in the below evaluation sheet and do their own evaluation for submission, but the evaluation done by the Procurer/ Evaluator shall be the valid evaluation and shall hold:

For each component listed below, provide detailed specifications with relevant materials including information on standards compliance.

### COMPLIANCE SHEET FOR BIDS

For each component listed below, provide detailed specifications with relevant materials including information on standards compliance.

Sr. No.	Component	Estimated Quantity	Requirements Met (Y/N)
1	CCTV Fixed Cameras for Stations (outdoor)	200	
2	CCTV PTZ Camera (Outdoor) at Stations and	230	
3	Network Video Recorder (Hardware)	1 Solution	
4	NVR (Network Video Recorder) (Software)	1 Solution	
5	CAMERA CONSOLE	28	
6	Ethernet Switches (Manageable) Stations	24	
7	Ethernet Switches (Manageable) NOC	4	
8	VPN Firewall for stations	24	
9	Ethernet Switches (FOR LAN)	4	
10	STATION CABINETS (with accessories)	30	
11	DATA CABINETS (with accessories)	6	
12	Video Wall with Controller	2	
13	SERVER FORM (CHASSIS) FOR BLADE SERVERS	1	
14	SERVER FORM (MID RANGE BLADE SERVERS)	12	
15	Server Infrastructure Rack 42U	6	
16	SAN STORAGE (500 TB)	1	
17	STORAGE (100 TB) (Direct Attached Storage)	1	
18	Uninterruptible Power Supply (UPS) 30kVA for Control Center	2	
19	Public Address System for Station and Command & Control Center	25	

20	<b>IP TELEPHONY</b>	80	
21	<b>IP Telephony (IP PBX)</b>	1	
22	<b>Data Center Core Switches (Data Center)</b>	2	
23	<b>Data Center Firewall (Data Center)</b>	2	
24	<b>Rack Mount Sine Wave 5000VA 230V UPS</b>	24	
25	<b>DESKTOP COMPUTERS (with Dual monitor)</b>	28	
26	<b>Modules, Hardware and Passive Materiel</b>	As per Actual	
27	<b>Connectivity (Fiber optic)</b>	1 solution	
28	<b>Any other Hardware/software/component</b>	As per Actual	

Mandatory requirements given above must be adhered to in order to qualify for evaluation against the criteria given.

### Technical Evaluation Criteria

References and supporting documentation required as evidence for each:

It is mandatory to score minimum 60 marks

In case of JV, marks shall be evaluated jointly for all members unless stated otherwise.

The requirement of documents for evidence as indicated in the table below is applicable to all members of JV unless specified otherwise.

Sr No.	Criteria	Max. Marks	Comment/Description	Documents required
1	Number of Projects implemented  CCTV Video surveillance system having at least 50 cameras	10	3 projects or more = 10 Points 2 Projects = 07 Points 1 Project = 05 Points 0 Project = 0 Points	Contract Document OR Letter of Award OR Any other valid document for evidence
2	Number of successful Projects implemented  Video Wall system	10	3 projects or more = 10 Points 2 Projects = 07 Points 1 Project = 05 Points 0 Project = 0 Points	Contract Document OR Letter of Award OR Any other valid document for evidence
3	Number of Projects implemented  Lay out and Connectivity (fiber optics ) system	10	3 projects or more = 10 Points 2 Projects = 07 Points 1 Project = 05 Points 0 Project = 0 Points	Contract Document OR Letter of Award OR Any other valid document for evidence
4	Number of Projects implemented  Public Address System or IP	05	3 projects or more = 5 Points 2 Projects = 3 Points 1 Project = 2 Points 0 Project = 0 Points	Contract Document OR Letter of Award OR Any other valid document for evidence

## 78. Equipment Cost

**MUST BE SUBMITTED AS AN ANNEXURE IN SAME SEPARATE ENVELOPE HIGHLIGHTED AS FINANCIAL PROPOSAL ALONGWITH PRICE SCHEDULE/BID PRICE/FORM OF BID**

(Will be used for the purposes of estimating and analyzing solution costs)

**Note: Major components and their quantities are listed below; Bidder may list (sr.no. 28) any other/more equipment required to integrate the system and to make it functional.**

Equipment Cost		Col-A	Col-B	Col-C = Col-A*Col-B
Sr No.	Component	Estimated Quantity	Unit Price (Inc. Taxes)	Total Price (PKR) (Inc. Taxes)
1	CCTV Fixed Cameras for Stations (outdoor)	200		
2	CCTV PTZ Camera (Outdoor) at Stations and Corridor	230		
3	Network Video Recorder (Hardware)	1 Solution		
4	NVR (Network Video Recorder) (Software)	1 Solution		
5	CAMERA CONSOLE	28		
6	Ethernet Switches (Manageable) Stations	24		
7	Ethernet Switches (Manageable) NOC	4		
8	VPN Firewall for stations	24		
9	Ethernet Switches (FOR LAN)	4		
10	STATION CABINETS (with accessories)	30		
11	DATA CABINETS (with accessories)	6		
12	Video Wall with Controller	2		
13	SERVER FORM (CHASSIS) FOR BLADE SERVERS	1		
14	SERVER FORM (MID RANGE BLADE SERVERS)	12		
15	Server Infrastructure Rack 42U (Imported/Branded)	6		
16	SAN STORAGE (500 TB)	1		
17	STORAGE (100 TB) (Direct Attached Storage)	1		
18	Uninterruptible Power Supply (UPS) 30kVA for	1		
19	Public Address System for Station and Command & Control Center	25		
20	IP TELEPHONY	80		
21	IP Telephony (IP PBX)	1		
22	Data Center Core Switches (Data Center)	2		
23	Data Center Firewall (Data Center)	2		
24	Rack Mount Sine Wave 5000VA 230V UPS	24		
25	DESKTOP COMPUTERS (with Dual monitor)	28		
26	Modules, Hardware and Passive Materiel	As per Actual		
27	Connectivity (Fiber optic)	1 solution		
28	Any other Hardware/software/component required	As per Actual		

**Annexure-G: Tender Security Form**

**TENDER SECURITY FORM**

**WHEREAS** [Name and Address of the Contractor] (hereinafter called "the Contractor") has submitted Tender against Tender Name (hereinafter called "the Tender") to the [Name and Address of the Procurer] (hereinafter called "the Procurer").

AND WHEREAS [Name of the Bank] having registered office at [Address of the Bank] (hereinafter called "the Guarantor") has agreed to give the Contractor a Guarantee;

THEREFORE the Guarantor hereby affirms to bind himself, his successors and his assigns to the Procurer, for the sum of PKR (in figures \_\_\_\_\_) (in words \_\_\_\_\_) and undertakes to pay to the Procurer / Purchaser, upon receipt of his written demand(s), any sum(s) as specified by him, not exceeding the above limit in aggregate, without cavil / argument and without the Procurer having to substantiate / prove or to show grounds / reasons for such claim(s), on the occurrence of any / all of the following conditions:

1. If the Contractor withdraws the Tender during the period of the Tender validity specified by the Contractor on the Tender Form; or
2. If the Contractor does not accept the corrections of his Total Tender Price; or
3. If the Contractor, having been notified of the acceptance of the Tender by the Purchaser during the period of the Tender validity, fails or refuses to furnish the Performance Security, in accordance with the Tender Document.

Provided that the Procurer / Purchaser shall specify the occurred condition(s) owing to which the said sum is due to him.

Provided further that any demand(s) / claim(s) from the Purchaser shall reach the Guarantor within thirty working days after the expiry of the Guarantee.

This guarantee shall remain valid up to \_\_\_\_\_ or until furnishing of the Performance Security, whichever is **earlier**.

Date this \_\_\_\_\_ day of 20\_\_.

**GUARANTOR**

Signature \_\_\_\_\_  
CNIC # \_\_\_\_\_  
Name \_\_\_\_\_  
Designation \_\_\_\_\_  
Address \_\_\_\_\_

**CCTV PTZ Camera (Outdoor) at Stations and Corridor**

		<b>PTZ Camera (Outdoor Stations and Corridor )</b>	<b>Yes</b>	<b>No</b>	<b>QTY</b>
<b>Features</b>	<b>Description</b>				<b>230</b>
CMOS	2.0 megapixel progressive scan CMOS sensor to track targets with 360 degree endless rotation				
Movement	Able to move at up to 450 degrees per second				
Zoom	4.7 - 94mm, F1.6 lens with 20x zoom				
Illumination	0.4 lux (F1.6) minimum illumination in color mode and 0.04 lux (F1.6) minimum illumination in monochrome mode				
Compression	H.264 and Motion JPEG compression				
Compliance	ONVIF compliant API				
3D privacy mask	Hide sensitive areas with 3D privacy mask				
exposure control	Automatic exposure control and iris control				
IR cut filter	Automatic removable IR cut filter for IR sensitivity at night				
POE	Power over Ethernet, 24 VAC or 24 VDC power input				
environmental conditions	Supports broad environmental conditions for challenging outdoor installations				
microphone and speaker	External microphone and speaker support for two-way audio				
External I/O	External I/O interface for connecting alarms and relays				
Security	Security Password protection, HTTPS encryption, digest authentication, WS authentication, user access log.				
Power Connector	Power Connector Waterproof 2-pin connector				
Operating Temperature	Operating Temperature -30 °C to + 50 °C (-22 °F to 122 °F) with IEEE 802.3at Class 4 PoE Plus power -45 °C to + 50 °C (- 50 °F to 122 °F) with external power				
Multiple streaming	H.264 streaming over UDP, TCP, HTTP or HTTPS & MJPEG streaming over HTTP or HTTPS				
<b>IR Range</b>	<b>50 m</b>				
	Housing	Weather Proof IP66 Housing			
	Mounting	Standard mounting accessories with brackets / clumps etc (mount kit for pole/ceiling).			
2	Installation	Onsite Cabling (FTP network & electrical) along with Installation / calibration/ testing with accessories including Piping/Ducting, electrification with earthing cable etc. Complete in all aspects (Per Camera Job)			<b>230</b> Nos.

<b>Offered Brand (Attachments):</b>	<b>Provide Name</b>	<b>Yes</b>	<b>No</b>
Make / Brand Name:			
Model Name:			
Sub-Model (if any):			

**Network Video Recorder**

S.No.	DESCRIPTION	Yes	No	QTY
1	The Network Video Recorder should have its own/embedded operating system and be capable to display and manage the entire surveillance system video streams for a minimum of 500 Channels IP video streams coming from the above cameras; the system may be split into several Network Video Recorders / systems each having good recording throughput to accommodate a total of 500 IP video streams recording, playback, at 2MBs per camera etc.			01 (System)
	The NVR should be capable of supporting variety of devices such as cameras, video encoders, video decoders, PTZ controller, NAS/SAN/ and other backup device etc.			
	The NVR should have built-in facility to store configuration of any kind of IP cameras. The System should be compatible with the Central Management System/Video Management System.			
	The software should Support flexible 1/2/4/16 Windows Split screen display mode or scroll mode on the PC monitor or on preview monitor as per requirement.			
	The software should be able to control all cameras i.e. PTZ control, Iris control, auto / manual focus, and color balance of camera, Selection of presets, Video tour selection etc.			
	Storage: The NVR should have data storage Capacity of 30 days using SAN.			
	The NVR should support different resolutions CIF/ 4CIF, SD/ HD, MP/ 1.3MP/2.0MP etc resolutions.			
	The NVR should support screen pop-ups on motion or alarm activation.			
	The system should support user access authority Configurable on per device or per device group basis.			
	The user shall have the facility to request the access of any Camera and can control the camera.			
	The hardware design should be of robust nature to avoid single points of failure, preferably with redundant fans and Power Supply			
	Power supplies and RAID storage for optimum reliability. Automatic load balancing, Active-Active Failover within a storage pool, multicast recording, and redundant recording.			
	Ability to serve 16/32 or more simultaneous playback Streams per NVR.			
	The system should have its own system manager for administer right and privileges for all devices, logs, etc.			

**Stations & Corridor Network Active Equipment**

**ETHERNET SWITCHES**

SR. No.	ITEM	DESCRIPTION	Yes	No.	Qty
1	<b>Ethernet Switches (Manageable)</b>	24-port 10/100/1000BASE-T PoE Ethernet Switch with four SFP Gigabit Ethernet uplink ports. Throughput 56 Gbps or above, 41 Mpps or above, OSPF v1/v2, IGMP v1/v2/v3, PIM, IEEE 802.1 Q-in-Q, Bidirectional Forwarding Detection (BFD), IEEE 802.1ag (Connectivity Fault Management) and VRF-Lite, Layer 2 QoS , • Layer 3 QoS Onsite Installation along with electrical, calibration/Testing with accessories including Piping/Ducting, electrification Etc.			24 Nos.
2	<b>Ethernet Switches (Manageable) DC</b>	24-port 10/100/1000BASE-T PoE Ethernet Switch with four SFP Gigabit Ethernet uplink ports. Throughput 56 Gbps or above, 41 Mpps or above, OSPF v1/v2, IGMP v1/v2/v3, PIM, IEEE 802.1 Q-in-Q, Bidirectional Forwarding Detection (BFD), IEEE 802.1ag (Connectivity Fault Management) and VRF-Lite, Layer 2 QoS , • Layer 3 QoS Onsite Installation along with electrical, calibration/Testing with accessories including Piping/Ducting, electrification Etc.			4 Nos.
	VPN Firewall for stations	Firewall performance (max)                      700Mbps IPS performance (NSS 4.2.1)                      75 Mbps AES256+SHA-1 / 3DES+SHA-1 VPN performance                      65 Mbps Maximum concurrent sessions                      32K New sessions/second (sustained, TCP, 3-way)                      1,800			32 (for access sites)

Installation	Onsite Cabling electrical along with Installation / calibration/ Testing with accessories including Piping/Ducting, electrification Etc. Testing & Commissioning, integration of entire Site System			
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<b>Offered Brand (Attachments):</b>	<b>Provide Name</b>	<b>Yes</b>	<b>No</b>
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Sub-Model (if any):			
Boucher / Technical Datasheet with Make, Model (Sub-Model (if any)):			
Direct / Authorized Distributor/Dealership certificate (Offered Brand)			
Agreed to provide the requisite quantity with in time frame:			
Agreed to provide the required warranty of the equipment:			
Agreed with other terms & conditions:			
Signed & Stamped documents:			

<b>NOTE :</b>
1. Maximum down time for all components including replacement of the whole unit as per SLA.
2. Please mention the country of origin/manufacturing/assembly of the quoted brand/model.
3. Vendor/Assembler to provide verification of serial numbers of all products.

**SERVER FORM (CHASSIS) FOR BLADE SERVERS**

S#	ITEM	DESCRIPTION	Yes	No	Qty
1	Chassis	Latest Chassis Supporting industry standard Gbe, FC, 10 GE & Infini band Switches and a minimum of 14 Blades. Supporting 2 and 4 Socket Blades in the same chassis.			01 Nos
	Power Supply	Redundant power sufficient to support a fully loaded chassis or higher			
	Cooling	Redundant Cooling sufficient to support a fully loaded chassis			
	Rack Mount Kit	Complete rack mount kit with all Accessories			
	Management Modules	Redundant Management Modules			
	KVM	Built-in KVM Functionality			
	Ethernet Switches	(2*24)/(1*48) Ports or Higher 10Gbps Ethernet Switch with 24 Activated Ports			
	FC Switches	24 Port or Higher 16Gbps FC Switch for Storage Connectivity			
	SFP Modules	4 x 10Gig and 4 x 1Gig Uplink SFP's 4 x 16Gbps and 4 x 8Gbps Uplink SFP's			
	Management Software	Chassis Management Software			

**SERVER FORM (MID RANGE BLADE SERVERS)**

SR. No.	ITEM	DESCRIPTION	Yes	No	Qty
1	Form Factor	2 socket blade server			12Nos
	Processor	2 x Intel Xeon Processor E5-Series 2650 v2 2.6GHz			
	RAM	32 GB ECC DDR3 1866MHz RDIMM (expandable up to 768 GB or equivalent)			
	Hard Drive	2 x 300GB 2.5in SFF Slim-HS 10K 6Gbps SAS HDD or higher			
	HBA	8Gb Fiber Channel Expansion Card			
	Virtual Fabric Adapter	10Gb Virtual Fabric Adapter supporting I/O Virtualization			

Installation	Onsite Cabling electrical along with Installation / calibration/ Testing with accessories including Piping/Ducting, electrification Etc. Testing & Commissioning, integration of entire Site System			
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Offered Brand (Attachments):	Provide Name	Yes	No
Make / Brand Name:			
Model Name:			
Sub-Model (if any):			
Boucher / Technical Datasheet with Make, Model (Sub-Model (if any)):			
Direct / Authorized Distributor/Dealership certificate (Offered Brand)			
Agreed to provide the requisite quantity with in time frame:			
Agreed to provide the required warranty of the equipment:			
Agreed with other terms & conditions:			
Signed & Stamped documents:			

NOTE:
1. Maximum down time for all components including replacement of the whole unit as per SLA.
2. Please mention the country of origin/manufacturing/assembly of the quoted brand/model.
3. Vendor/Assembler to provide verification of serial numbers of all products.

1	Disk Storage Architecture	Dual, high-performance intelligent RAID controllers.			
	Storage Expandibility	Storage Should be expandable upto 500 Drives or higher. The SAN must be scalable without fork-lift upgrades/ migrations.			
	Point-in- Time Copy	Comprehensive point-in-time copy <b>capability</b> supporting enterprise capabilities like incremental, space efficient and reverse snapshot functions Snapshot functionality should be included in the base system cost if not should be quoted separately <b>(No Licenses required)</b>			
	Replication Software	System should support Comprehensive Replication (for future enhancement )			
	Storage Tiering	Provides ability to dynamically move data between different types of drives or storage tiers to ensure optimization of high cost, high			

		performance drive utilization (for future enhancement)			
		Data movement between storage tiers must be automated, transparent to applications and based on advanced analysis of historical data access patterns.			
		Data movement between storage tiers must be performed at the sub logical unit (LUN) level to ensure optimization of high cost, high performance drives			
	Thin Provisioning	Ability to thin or over provision space allocated to hosts, i.e. space allocated to a host is not totally reserved for that host at time of allocation but rather is allocated to the host only as it is consumed			

**STORAGE (100 TB) (Direct Attached Storage)**

**IF PMA management want to save specified video clips/record for a longer period of time i.e. more than 30 days they will be saved on DAS.**

Sr. No.	ITEM	DESCRIPTION	Yes	No	Qty.
1	Device Type	Shared SAS Storage Dual controller with 16GB cache			01 No
	Supported Devices / Modules Qty	As per manufacturing standard with support up to 24 hosts or higher.			
	Installed Hard drive	36 x 3TB NL-SAS (108TB RAW)			
	total Capacity required	100 TB expandable up to 480 terabyte			
	Host Interface	4 x 6Gbps SAS port x 1Gbps iSCSI Ports 4x8 FC Gbps FC host interface			
	RAID Level	0, 1, 5, 6, 10			
	OS Support required	Linux 5.0, SuSE Linux 10.0, Microsoft Windows Server 2008 x64 Edition, Microsoft Windows 2003, Microsoft Windows 2008 & latest			
	Power Device	Power supply - hot-plug - plug-in Module			
	Power Redundancy	Yes			
	Installation	Onsite installation/configuration/calibration / integration testing etc.			

Item	Description	Yes	No	Qty
<b>Input</b>	Nominal Input Voltage: 380V 3PH( as per Pakistan standard) Input Frequency: 50/60Hz Input Connections: Hard Wire 5-wire (3PH + N + G) Number of Power Cords: 1  Load Capacity: 30kVA			02
<b>Output</b>	Nominal Output Voltage: 230VAC,380VAC 3PH  Output Connections: 1x Hard Wire 5-wire (3PH + N + G)			
<b>Agency Certifications</b>	cUL Listed, UL 1778, UL Listed			
<b>Environmental Requirements</b>	Operating Temperature: 32-104°F (0-40°C) Humidity: 0% Elevation: 0-3333' (0-999.9 m)  Storage Temperature: 32-104°F (0-40°C) Humidity: 0% Elevation: 0-10,000' (0-3000 m)			
	Serial/USB Port & RJ45 communication, Plug and Play, Built-in SNMP card for monitoring.			
	Standard back up time			

Installation	Onsite Cabling electrical along with Installation / calibration/ Testing with accessories including Piping/Ducting, electrification Etc. Testing & Commissioning, integration of entire Site System			
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Offered Brand (Attachments):	Provide Name	Yes	No
Make / Brand Name:			
Model Name:			
Sub-Model (if any):			

## Connectivity Specifications

Provision of fiber optics media is required at MBS route to fulfill the connectivity requirements of **IT SYSTEMS** and to cater for the future needs at **RAWALPINDI-ISLAMABAD METROBUS SYSTEM**. The media will be initially used for IT Systems and data transmission from other service provider and must have the provision of following items

Dedicated Fiber Optics cable deployment is required on Twenty four (24) Bus Stations and MBS track.

The network media should be capable to cater for the initially data requirements of IT Systems and for AFCBSS:

- ☐ All backbone connectivity (end to end) is required on state of the art **GPON (10G)** (Gigabit passive optical Network)
- ☐ Provision of duct (4" Inches PVC ) pipe is already available on MBS track
- ☐
- ☐ Layer 3 connectivity is required on each node for IT System
- ☐ Provision of independent for multiple VPNs and VLANs
- ☐ Provision of IP Pool on each nodes and aggregation site is required as per actual basis
- ☐ Aggregation on DC handoff is required on Gigabit interface
- ☐ Operations and Maintenance of the fiber network will be the sole responsibility of solution provider
- ☐ Guaranteed Network uptime 99.5% is required
- ☐ Laying, installation and deployment of following items

**GPON complete solution keeping in view of RFP need to be proposed, including all hardware i.e. OLT, ONT and other accessories etc.**

Sr.	Item	Type
1	Single mode Fiber Cable	48 core Fiber (Steel Armoured)
2	ODF / Attachments / Misc	As per industry Standard

Note: The above feature list covers the bare minimum requirements, however any services provider can proposed any value added features.