

TERMS OF REFERENCE

PREVENTIVE AND CORRECTIVE MAINTENANCE OF PROJECT AURORA

PHASE I AND CCTV PROJECT OF BARANGAY MANRESA AND BARANGAY SAN

ANTONIO

I. RATIONALE AND BACKGROUND

The Quezon City Government remains steadfast sustaining itself as a Quality Community, a progressive and peaceful environment pursuant to the United Nations Sustainable Development Goal (SDG) No. 11, to make cities and human settlements inclusive, safe, resilient, and sustainable. Despite of increase in Crime Solution Rate, the presence of additional CCTV Cameraras in the community is expected to affect the behavior of the community and this may lead them to abide with the law. Thus, the City Government shall invest on preventive and corrective maintenance of Project Aurora Phase 1, including CCTV Projects in Barangay Manresa and Barangay San Antonio. This aims to maintain it low crime rate, which was based on the report of the Quezon City Police District (QCPD).

II. PROJECT DESCRIPTION

The project aims to provide corrective and preventive maintenance for Project Aurora Phase I CCTV Cameras, including the City's CCTV Project in Barangay Manresa and Barangay San Antonio for until 31 December 2023.

III. SCOPE OF WORK AND SERVICE LEVEL AGREEMENT

A. STATEMENT OF REQUIREMENT

The Service Provider shall provide *QUEZON CITY GOVERNMENT* with Preventive and Corrective Maintenance and Technical Support Services for items listed in **Schedule A**.

The Service Provider shall operate and maintain a Technical Support Center to provide after sales maintenance and technical support services for the products and solutions supplied by the company. Which includes routine preventive maintenance, fault isolation and corrective maintenance, remote telephone support and other technical services that may arise may be communicated to us.

The Service Provider shall have qualified and experienced team of technicians and engineers, maintains the operations of the Technical Support Center, which also acts as the 1st and 2nd level technical support.

B. OVERALL EQUIPMENT QUANTITIES

- See Schedule A, List of Covered Equipment

C. PREVENTIVE & CORRECTIVE MAINTENANCE

Preventive Maintenance

Preventive Maintenance (PM) shall include instructions and advice on the procedures of maintaining and keeping the system in optimal operating condition, as well as the provision of labor in carrying out the actual maintenance works. Maintenance schedule shall be drawn up according to the actual system and equipment listed in Schedule A, List of Covered Equipment. Schedule of maintenance should be available once needed. Report of the maintenance made will be provided to QUEZON CITY GOVERNMENT through our representative. Completion time of the Annual Preventive Maintenance is 14 weeks including documentation.

Corrective Maintenance

Corrective Maintenance (CM) are on-call maintenance service to be rendered at the request of the Customer to diagnose and correct any malfunction. Items included in the the proposed list of spares found in Schedule E will be used as replacement for any defective product.

D. SERVICE LEVELS

Definition

Service level is defined in terms of:

- a. Response time: elapsed time between user call for service and arrival to the site by Service Provider service personnel.
- b. Mean Time to Repair and Restore (MTTR): elapsed time between initial actions taken for repair/corrective of the fault until the equipment or system is up for operation use within priority classifications as proposed below.

Attributes to the Service Levels proposed:

1. Service request classification
2. Response time
3. Restoration time

Service Request Classification:

Service Request Classification is important to prioritize the fault and resolution. Each

service request received from the Customer shall generally be classified to three classes, subject to customer's acceptance of the classification at the time of drawing up the maintenance agreement.

Priority 1 shall mean that the fault occurring significantly impacts the operation, management and/or safety of the premises. For example, the Security System software becomes inaccessible to operators or complete loss of control to all devices and sub-system elements.

Priority 2 shall mean that the fault occurring affects the operation and management of the premises but without compromising the safety of the premises in a significant manner. For example, failure in a redundant link, or loss of control to an end-device.

Priority 3 shall mean that the fault occurring have only minimal impact on the operation of the building. For example, intermittent degradation in network performance such as reaction times from devices became longer than usual.

Response time

Response time depends on the classification of the service request. It is subject to be agreed upon at the time of drawing up the maintenance agreement with the Customer, but shall in general be represented as follows:

Priority 1: 48 hours on-site, 8hrs x 5 days coverage.

Priority 2: Next 3 business day on-site, 8hrs x 5 days coverage.

Priority 3: Next 4 business days on-site, 8hrs x 5 days coverage

Restoration Time

Restoration time is the time from acknowledgement of service request to the time of interim fault rectification. This generally depends on the availability of spares at the local site. If spares are available, replacing it with the spare parts can rectify faults. The Service Provider shall return the faulty parts for repair. The time between acknowledgement of service request to the time the faulty part is repaired and returned is the permanent fault restoration time. It is a subject to be agreed upon at the time of drawing up the maintenance agreement with the Customer, but shall in general be represented as follows:

With spares available

Priority 1: Within 3 days, 8hrs x 5 days coverage.

Priority 2: Within 4 days, 8hrs x 5 days coverage.

Priority 3: Within 5 days, 8hrs x 5 days coverage.

E. MAINTENANCE RECORDS AND REPORTING

The Service provider shall keep records of all routine maintenance and service requests in an efficient manner. The record shall include the commencement and completion of all maintenance and repair and details of all the faults. Faults and degradation detected during preventive maintenance shall be recorded separately from faults detected or reported outside those periods. Meetings shall be held with the Customer on a monthly basis to discuss on technical and maintenance issues, and to update the Customer on the state of the system and equipment viability.

F. SERVICE LEVELS CLASSIFICATION TO SYSTEMS INSTALLED

- See Schedule B, Service Level per Type of System Installed

MTTR Time

MTTR time will be three (3) to five (5) days except in occasion that:

- The spare is not available or waiting for spare retrievable and delivery.
- Heavy repair required such as accident case, any events caused by natural disaster, events beyond the control of the company.
- Mobilization of machinery such as Man-Lifts, Crane and other heavy equipment is required. - Delay in getting approval for access to site.
- Any 3rd party service is required.
- Mobilization of vendor representative.
- Does not include Saturday, Sunday, and Holiday

Service Level Measurement Method

Response time = Time of attending fault - Time of receiving call.

MTTR = Completion Time of repair and restore - First time of attending the fault.

G. SCHEDULE MAINTENANCE COSTINGS

- See Schedule C, Schedule, and Fees for Preventive Maintenance Services

H. SCOPE OF WORKS FOR PREVENTIVE MAINTENANCE

- See Schedule D, Scope of Works

**I. SCHEDULE OF PREVENTIVE AND CORRECTIVE
MAINTENANCE**

Preventive and Corrective Maintenance schedule will be Mondays to Fridays from 8:30 am to 5:30 pm, in the case that we will be required to work at night or after the schedule time and date, special rate will be imposed.

J. FEASIBLE SPARE UNIT

- See Schedule E, List of Feasible Spare Unit

IV. DURATION OF PROJECT

The project shall be completed by 31 December 2023 from the issuance of the Notice to Proceed.

V. APPROVED BUDGET ALLOCATION

The total budget allocation for Preventive and Corrective Maintenance is Twenty Million Pesos (P20,000,000.00)

VI. TERMS OF PAYMENT

The payment method shall be a one-time payment after 31 December 2023, which shall be based on the successfully conducted preventive and corrective maintenance by the service provider.

VII. PROJECT IMPLEMENTOR

The Office of the City Administrator shall be the project Implementer on behalf of the Quezon City Government and shall be in charge of ensuring the successful execution of the project. Further, the Office shall be responsible for project monitoring and strict implementation of the requirements and guidelines in this Terms of Reference.

VIII. PROJECT COST ADJUSTMENT

As stated in Section 61 of R.A. 9184 and its IRR, in cases where the cost of the awarded contract is affected by any applicable new laws, ordinances, regulations, or other such acts of the Government of the Philippines, promulgated after the date of bid opening, a contract price adjustment shall be made, or appropriate relief shall be applied on a no loss basis.

IX. PENALTIES FOR BREACH OF CONTRACT

Failure to deliver the services according to the standards and requirements set by the Quezon City Government shall constitute an offense and shall subject the Service provider to penalties and or liquidated damages pursuant to R.A. 9184 and its IRR.


X. CANCELLATION OR TERMINATION OF CONTRACT

The contract may be cancelled or terminated:


- a. Should there be any supervening event resulting from National Government Agency projects and/or Local government projects that may hinder or restrict the operation of the route according to this Terms of Reference such as but not limited to the Schedule of Trips, or
- b. Should there be any dispute, controversy or difference between the parties arising out of this Terms of Reference, the parties shall exert efforts to amicably settle such dispute or difference. However, if any dispute, controversy, or difference cannot be resolved by them amicable to the mutual satisfaction for arbitration in accordance with existing laws, without prejudice for the aggrieved party to seek redress exclusively before a court of competent jurisdiction within Quezon City.

The guidelines contained in R.A 9184 and its IRR shall be followed in the cancellation or termination of this Contract.

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Noted by:


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City Administrator

SCHEDULE A

COVERED EQUIPMENT UNDER PREVENTIVE MAINTENANCE AGREEMENT (QC HALL & QCPD)

ITEM NO	ITEM DESCRIPTION	UNIT	QUANTITY DELIVERED
1	IP BULLET 3MP CAMERA WITH SURGE PROTECTION	sets	200
2	IP BULLET 5MP CAMERA WITH SURGE PROTECTION	sets	141
3	IP PTZ DOME CAMERA WITH SURGE PROTECTION	sets	101
4	36 PORTS, 10G MANAGED OPTICAL FIBER SWITCH WITH 10G SFP MODULE	set	1
5	28 PORTS, L3 10G MANAGED SWITCH WITH 10G SFP MODULE	set	1
6	INDUSTRIAL 12 PORT, FULL GIGABIT POE SWITCH WITH 10G SFP MODULE	sets	11
7	28-PORT, FULL GIGABIT POE SWITCH WITH SFP MODULE	sets	10
8	18U WALL MOUNT DATA CABINET ACCESSORIES & PARTS ONLY (EXCLUDING CABINET)	sets	9
9	POWER DISTRIBUTION BOARD (EXCLUDING CABINET)	sets	9
10	42U CLOSED DATA CABINET ACCESSORIES & PARTS ONLY (EXCLUDING CABINET)	sets	2
11	CENTRAL MANAGEMENT SERVER	sets	2
12	NETWORK VIDEO SERVER	sets	8
13	HARD DISK DRIVE	sets	128
14	KEYBOARD CONTROLLER	set	1
15	DIGITAL VIDEO MATRIX	sets	2
16	46" VIDEO WALL CCTV MONITOR	sets	8
17	OPERATOR WORKSTATION	sets	5
18	OPERATOR WORKSTATION MONITOR	sets	9
19	3KVA ON-LINE UPS	sets	6
20	SUPPLY OF MATERIALS, PERIPHERALS & ACCESSORIES FOR THE INSTALLATION OF REMOTE COMMUNICATION BOX	lot	1
21	REMOTE COMMUNICATION BOX	sets	242

SCHEDULE A

COVERED EQUIPMENT UNDER PREVENTIVE MAINTENANCE AGREEMENT (BARANGAY MANRESA AND BARANGAY SAN ANTONIO)

ITEM NO	ITEM DESCRIPTION	UNIT	QUANTITY DELIVERED
1	2MP FIXED IP BULLET CAMERA WITH SURGE PROTECTOR	set	110
2	32 CHANNEL 4K NETWORK VIDEO RECORDER WITH 12 (2 X 6 TB) TB HDD STORAGE	set	8
3	46" VIDEO WALL MONITOR (INCLUDING BRACKET AND HDMI CABLE)	set	4
4	49" VIDEO WALL MONITOR (INCLUDING BRACKET AND HDMI CABLE)	set	4
5	COMMBOX-A <ul style="list-style-type: none"> - COMMBOX REMOTE COMMUNICATION BOX WITH SFP MODULES, FIBER TERMINAL BOX, PATCH CORD - 4PORT INDUSTRIAL POE SWITCH - 4G OUTDOOR WIRELESS ROUTER - MEDIA CONVERTER - AUTOMATIC VOLTAGE CURRENT PROTECTOR - AC220 SURGE PROTECTOR 	set	13
6	COMMBOX-B <ul style="list-style-type: none"> - COMMBOX REMOTE COMMUNICATION BOX WITH SFP MODULES, FIBER TERMINAL BOX, PATCH CORD - 8PORT INDUSTRIAL POE SWITCH - 4G OUTDOOR WIRELESS ROUTER - MEDIA CONVERTER - AUTOMATIC VOLTAGE CURRENT PROTECTOR - AC220 SURGE PROTECTOR 	set	17
7	CORE SWITCH AND DATA CABINET ACCESSORIES & PARTS ONLY (EXCLUDING CABINET)	set	2
8	16-PORT POE SWITCH WITH PATCH PANEL AND ACCESSORIES	set	1
9	WIFI ACCESS POINT	sets	2

SCHEDULE B

SERVICE LEVEL PER TYPE OF SYSTEM INSTALLED

ITEM	TYPE OF SYSTEM	PRIORITY	RESPONSE TIME	MTTR & DOWNTIME
1	Network Video Recorder / Server,	1	48 hrs	3
2	Camera, Monitor	2	Next 3 days	4
3	Peripherals, Accessories	3	Next 4 days	5

MTTR (Mean Time to Repair and Recover) will be three (3) to five (5) days except on occasion(s) that:

1. The spare part(s) is(are) not available or waiting for spare part(s) to be retrieved/delivered
2. Heavy repair work is required, such as is(are) caused by accidents, events caused by natural disasters, events beyond the control of the CONTRACTOR
3. Delays in approvals for access to the site
4. Third-party service providers are involved.
5. Mobilization of vendor representative
6. Does not include Saturday, Sunday and Holiday

SCHEDULE OF MAINTENANCE COST

(ANNUAL PREVENTIVE MAINTENANCE)		Total Amount	200 CAMERA	242 CAMERA	60 CAMERA	50 CAMERA		
CCTV PROJECT AURORA PHASE 1, BARANGAY MAMRESA AND BARANGAY SAN ANTONIO			CITY HALL	PNP STREET	BRCV. MAMRESA	BRCV. SAN ANTONIO		
Item	Description	Quantity	Unit	Price In (Php) Year 2023	Price In (Php) Year 2023	Price In (Php) Year 2023	Price In (Php) Year 2023	
1	Administration / Supervision Cost	1	lot	Included	Included	Included	Included	
2	Preventive Maintenance, Preventive System Maintenance includes connectivity monitoring and Consumables	1	lot	3,647,959.57	698,871.01	1,904,996.11	514,713.11	529,379.34
3	Corrective Maintenance (regular maintenance activities): power reset, repair fiber cable and power line, on call field service, check up and mobile connectivity	1	lot	6,771,786.55	1,196,588.46	4,079,261.28	802,416.43	693,520.38
4	Provision of Spare Units	1	lot	6,205,595.06	1,499,570.89	3,301,068.88	708,124.70	696,830.59
5	Labor to Install Spares and for New Lay-out of Cables	1	lot	1,231,801.68	409,529.17	409,529.17	206,371.67	206,371.67
6	Mobilization / Demobilization	1	lot	Included	Included	Included	Included	Included
	Preventive & Corrective Maintenance Cost	1	lot	17,857,142.86	3,804,539.53	9,694,855.44	2,231,625.91	2,126,101.98
	12% VAT	1	lot	2,142,857.14	456,547.14	1,163,382.65	267,795.11	255,132.34
	Total Preventive and Corrective Maintenance Cost for 1 Year	1	lot	20,000,000.00	4,261,106.67	10,858,238.09	2,499,421.02	2,381,234.22

Notes:

1. Above cost is for the Preventive Maintenance of CCTV Project Aurora Phase 1, Barangay Mamresa and Barangay San Antonio only.
2. All necessary permits needed on site (Government or Non-Government) shall be provided by the client.
3. Above cost includes the provision of Spare Units

SCHEDULE D

SCOPE OF WORKS

Item	Description
1	IP Camera (Bullet / PTZ)
	Inspect and clean fixed IP Bullet Camera, camera lens, and viewing windows, camera housing mounting and wiring
	Remove all items obstructing the view of the camera
	Checking and re-crimping and re-tightening of connector to avoid loose connection and video interference
	Checking the video output of camera. Any drop in video signal will be addressed with corrective actions
	Check camera input voltage. Any fluctuation in input voltage will be addressed with the corrective actions
	Check focus and angle of camera. Camera re-focusing and adjustment to the required angle of view
	Checking of pan and tilt of IP PTZ Camera
2	Surge Protection Equipment
	Checking of the device LED indicator if in normal condition
	Checking of the device wiring and re-tightening of termination to avoid loose connection
	Network Communication Equipment (Managed Optical Fiber Switch / POE Switch)
	Check fiber port switch if properly working and fully functional
	Cleaning of unit and checking of wiring connections if properly connected
	Checking of POE ports if properly working and fully functional
	Checking of the device LED indicator if in normal condition
3	Power Distribution Board (PDB)
	Cleaning of enclosure and inspection of physical unit if in good condition
	Cleaning of built-in equipment such as power supply unit, surge protector, network switch and other peripheral
	Checking and inspections of wiring and re-tightening of termination to avoid loose connection
	Checking and testing of functionality of power supply, circuit breakers, network switch and other built-in peripheral
	Checking and inspection for any sign of equipment failure
4	Uninterrupted Power Supply (UPS)
	Cleaning of UPS unit
	Checking of the device LED indicator if in normal condition
	Checking of Input and Output Voltage if in normal condition (220VAC)
	Checking and testing the device functionality
	Checking and re-tightening of termination to avoid loose connection

SCHEDULE D

SCOPE OF WORKS

Item	Description
5	Monitor
	Cleaning of monitor unit
	Checking and testing the device functionality
	Checking of the device LED indicator if in normal condition
	Adjustment to proper setting of brightness and contrast for better viewing
6	Keyboard Controller
	Cleaning of keyboard controller unit
	Checking and testing the device functionality
	Checking of the device LED indicator if in normal condition
	Checking and re-tightening of termination to avoid loose connection
7	Network Video Matrix Server
	Cleaning of network video matrix unit
	Checking and testing the device functionality
	Checking of the device LED indicator if in normal condition
	Checking and testing of cable connection and port
	Checking of system configuration and other parameter
	Firmware mangement
8	Remote Communication Boxes
	Cleaning of enclosure and inspection of physical unit if in good condition
	Cleaning of built-in equipment such as power supply unit, surge protector, network switch and other peripheral
	Checking and inspections of wiring and re-tightening of termination to avoid loose connection
	Checking and testing of functionality of power supply, circuit breakers, network switch and other built-in peripheral
	Checking and inspection for any sign of equipment failure
9	Central Management Server
	Cleaning of central management server unit
	Checking and testing the device functionality
	Checking of the device LED indicator if in normal condition
	Checking and testing of cable connection and port
	Checking and mangement of software
	Checking and mangement of storage status

SCHEDULE D

SCOPE OF WORKS

Item	Description
10	Wifi Access Point Cleaning of wifi access point unit Checking and testing the device functionality Checking of the device LED indicator if in normal condition Checking of signal strength and proper alignment Checking of load status
11	Hard Disk Drive Checking and testing the device functionality Checking of stored records based on the required retention Checking of health status
12	PC Workstation Cleaning of pc workstation unit Checking and testing the device functionality Checking of the device LED indicator if in normal condition Cable management Checking and testing of input and output interface, console, keyboard,mouse, media drive,
13	Network Video Recorder Checking and testing of interface to Local Area Network (LAN) Checking of system time and date synchronization Perform system application maintenance, test network, test machine shutdown Do back up for system configuration. Check and update firmware if necessary
14	Data Connectivity Cable management Checking of stored records based on the required retention Perform playback to check the network video recorder saved records Management of network video recorder configuration and settings Sim Card Registration and Load Monitoring

SCHEDULE E

LIST OF FEASIBLE SPARES FOR QC HALL & QCPD

ITEM NO	ITEM DESCRIPTION	UNIT	QTY
1	IP BULLET 3MP CAMERA WITH SURGE PROTECTION	sets	10
2	IP BULLET 5MP CAMERA WITH SURGE PROTECTION	sets	8
3	IP PTZ DOME CAMERA WITH SURGE PROTECTION	sets	6
4	INDUSTRIAL 12 PORT, FULL GIGABIT POE SWITCH WITH 10G SFP MODULE	sets	2
5	28-PORT, FULL GIGABIT POE SWITCH WITH SFP MODULE	sets	2
6	ACCESSORIES & PARTS ONLY OF 18U WALL MOUNT DATA CABINET	set	1
7	POWER DISTRIBUTION BOARD	set	1
8	ACCESSORIES & PARTS ONLY OF 42U CLOSED DATA CABINET	sets	2
9	NETWORK VIDEO SERVER	set	1
10	HARD DISK DRIVE	sets	16
11	DIGITAL VIDEO MATRIX	set	1
12	46" VIDEO WALL CCTV MONITOR	set	1
13	3KVA ON-LINE UPS	sets	2
14	SUPPLY OF MATERIALS, PERIPHERALS & ACCESSORIES FOR THE INSTALLATION OF REMOTE COMMUNICATION BOX	lot	1
15	REMOTE COMMUNICATION BOX	sets	3
16	OUTDOOR CAT5E NETWORK CABLE (305M/ROLL)	mtrs	2440
17	ROYAL CORD 16/2 (75M/ROLL)	mtrs	900
18	THHN NO.14 (2.0SQ.MM) STRANDED CABLE (150M/ROLL)	mtrs	750

GRAND TOTAL AMOUNT OF SPARES : 4,800,639.77

SCHEDULE E

LIST OF FEASIBLE SPARES FOR BARANGAY MANRESA & BARANGAY SAN ANTONIO

ITEM NO	ITEM DESCRIPTION	UNIT	QUANTITY FOR SPARES
1	2MP FIXED IP BULLET CAMERA WITH SURGE PROTECTOR	set	6
2	32 CHANNEL 4K NETWORK VIDEO RECORDER WITH 12 (2 X 6 TB) TB HDD STORAGE	set	2
3	46" VIDEO WALL MONITOR	set	1
4	49" VIDEO WALL MONITOR	set	1
5	COMMBOX-A - COMMBOX REMOTE COMMUNICATION BOX WITH SFP MODULES, FIBER TERMINAL BOX, PATCH CORD - 4PORT INDUSTRIAL POE SWITCH - 4G OUTDOOR WIRELESS ROUTER - MEDIA CONVERTER - AUTOMATIC VOLTAGE CURRENT PROTECTOR - AC220 SURGE PROTECTOR	set	1
6	COMMBOX-B - COMMBOX REMOTE COMMUNICATION BOX WITH SFP MODULES, FIBER TERMINAL BOX, PATCH CORD - 8PORT INDUSTRIAL POE SWITCH - 4G OUTDOOR WIRELESS ROUTER - MEDIA CONVERTER - AUTOMATIC VOLTAGE CURRENT PROTECTOR - AC220 SURGE PROTECTOR	set	1
7	CORE SWITCH AND DATA CABINET ACCESSORIES & PARTS ONLY	set	1
8	OUTDOOR CAT5E NETWORK CABLE (305M/ROLL)	mts	610
9	ROYAL CORD 16/2 (75M/ROLL)	mts	3750
10	OUTDOOR OPTIC CABLE 7MM SM 8 CORE, BLACK COLOR (1000M/ROLL)	mts	3000

GRAND TOTAL AMOUNT OF SPARES 1,404,955.29