

TERMS OF REFERENCE

CCTV SURVEILLANCE PROJECT FOR BARANGAY QUIRINO 3B

I. BACKGROUND AND RATIONALE

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 Cameras 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 install CCTV Cameras in Barangay Quirino 3B. 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 requires the complete set-up of an IP-Based Surveillance System over a private and secured network. The project shall include the complete set-up of a CCTV Surveillance Monitoring Platform. The Command Center will be established to monitor the installed IP Cameras.

III. OBJECTIVE

To assure peace, order, and public safety of the constituents of the barangay

IV. SCOPE OF WORK

The equipment and devices will be deployed within the vicinity of BARANGAY QUIRINO 3B. Further, the supply and delivery of Cameras and other equipment and devices including but not limited to the following:

- Supply and installation of single mode outdoor optical cables
- Fixed IP Cameras including brackets and surge protection
- Data Cabinets used for indoor IDF/MDF including shelves, PDUs and other accessories.
- Remote Communication Boxes used for outdoor IDF including shelves, PDUs and other accessories
- Network Switches including Media Converters and/or SFP Modules
- Network Video Recorders including Hard Disk Drives
- Videowall Monitors including bracketry and connection cables, and
- Uninterrupted Power Supply

FIELD EQUIPMENT

The Outdoor Field Equipment shall be composed of the following items as shown on the location and instructions from the plottings in the location plans:

(See Annex A)

- 5MP Fixed IP Bullet Camera with Surge Protection.
- Remote Communication Box with minimum 4-port Industrial PoE Switch (including Cabinet and Accessories, Fiber Terminal Box, patch cords and surge protector)
- Use of Wifi Access Point is permitted where fiber optic cable is not feasible.

NETWORK COMMUNICATION AND HEAD-END EQUIPMENT

All equipment shall be suitable for the working environment to where it should be deployed. Whereas the Head-End Equipment will function as the Central System for Management, Recording, Storage as well as Live and Playback Monitoring.

- 32-ch 4K Network Video Recorder with 12 TB Hard Disk Drive Storage Capacity.
- Video Wall CCTV Monitors, brackets, and accessories
- Core Switch and/or PoE Switch including 42U 600*800 Closed Data Cabinet, UPS, patch panels and accessories.

V. PROJECT STANDARDS AND REQUIREMENTS

RESPONSIBILITIES OF THE QUEZON CITY GOVERNMENT (QCG).

- a. WAN and Internet connectivity will be provided by the QCG
- b. During the installation of the outdoor field equipment in all locations within the city boundaries, traffic management shall be in full coordination and assistance by the concerned Department of QCG and the Barangay Administration.
- c. QCG will provide the needed 220VAC Mains wherever necessary to power up the CCTV System with proper grounding system.
- d. Storage of items delivered will be provided by QCG.
- e. The QCG will provide additional mounting post if necessary.
- f. QCG will process and secure the needed permits with the Pole/Post owners where cameras will be installed and where cables will pass.
- g. Poles, traffic lights post, lighting post, foot bridge, etc... which will be used for the camera mounting will be utilized. The QCG will provide additional mounting post when necessary.
- h. Any civil, electrical, mechanical or joinery works needed on site shall be provided by QCG.
- i. All other local government permits shall be provided by QCG.

RESPONSIBILITIES OF THE SERVICE PROVIDER

Winning Bidder shall comply with the following Scope of Work:

- Full Structured Cabling works for Outdoor Cameras
- All conduiting works for indoor cameras
- Installation, testing and commissioning of IP CCTV System
- Connectivity of all offered cameras shall be wired and/or wireless transmission

OTHER REQUIREMENTS

Other requirements must be considered as integral part of the bid proposal.

- 1.) Statement of warranty is a minimum of One (1) year onsite warranty on parts and services.
- 2.) Submit a certification that they are the Authorized Distributor of the brand being offered.
- 3.) Single line diagram and camera locations reflected on a floor plan or site development plan.
- 4.) Certificate of site inspection from the End-User
- 5.) List of existing service center and technical support
- 6.) Affidavit of Undertaking for the following:
 - Upgrades for new software version during warranty will be given at no additional cost
 - System maintenance is included during the warranty period
 - Provide training for the end-user
 - The proposed CCTV can be integrated seamlessly to the QC Unified Command Center

- Must have at least 15 years of experience in the electronic security, surveillance industry
- The offered brand for CCTV cameras and equipment must at least have been in the market for at least 20 years in experience in the Philippines Market (there should be a proof of company stability of the manufactures of the CCTV equipment)

VI. PROJECT IMPLEMENTER

Barangay Quirino 3B 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.

The Barangay Police Security Officers (BPSOs) are responsible to assist in the project monitoring and strict implementation of the requirements and guidelines in this Terms of Reference.

VII. PROJECT DURATION

The Project Duration will be 90 calendar days upon issuance of Notice to Proceed.

VIII. WARRANTY

- One (1) year onsite warranty on parts and service.
- Includes a system maintenance during the warranty period.

IX. APPROVED BUDGET FOR THE CONTRACT

ITEM NO	ITEM DESCRIPTION	QTY	UNIT	UNIT COST (PHP)	TOTAL COST (PHP)
SUPPLY, DELIVERY AND INSTALLATION OF CCTV SURVEILLANCE FOR BARANGAY QUIRINO 3-B					
1	SMP FIXED IP BULLET CAMERA WITH SURGE PROTECTOR	53	sets	7,340.00	389,020.00
2	32 CHANNEL 4K NETWORK VIDEO RECORDER WITH 12TB HDD STORAGE	4	sets	28,800.00	115,200.00
3	46" LED VIDEO WALL MONITOR (INCLUDING BRACKET AND HDMI CABLE)	4	sets	155,700.00	622,800.00
4	REMOTE COMMUNICATION BOX - 4 PORT INDUSTRIAL POE SWITCH - AUTOMATIC VOLTAGE CURRENT PROTECTOR - SURGE PROTECTOR	11	sets	60,010.00	660,110.00
5	CORE SWITCH WITH CLOSED DATA CABINET, UPS, PATCH PANELS & ACCESSORIES	1	lot	96,628.00	96,628.00
6	16-PORT POE SWITCH WITH PATCH PANEL AND ACCESSORIES	1	set	11,550.00	11,550.00
7	PROJECT INSTALLATION COST A. SUPPLY, DELIVERY AND INSTALLATION OF CABLES B. SUPERVISION, COORDINATION, INSTALLATION, TERMINATION, TESTING AND COMMISSIONING C. LABOR FOR BOX INSTALLATION D. PROJECT MANAGEMENT, TRAINING AND DOCUMENTATION	1	lot	5,854,692.00	5,854,692.00
GRAND TOTAL COST (PHP) :					7,750,000.00

(Full Technical Specification: See Annex C)

X. TERMS OF PAYMENT

- 15% upon submission of project implementation plan which includes:
 - Scope of work to be done
 - Plotting of camera locations
 - Timeline / Gantt chart for work schedule
- 30% upon delivery of all major equipment
- 55% upon completion of project which includes Supply, delivery and installation of cables and conduits; Supervision, Installation, Termination, Testing and Commissioning; Project Management & Training.

XI. PENALTIES FOR BREACH OF CONTRACT

Failure to deliver the services according to the standards and requirements set by the City shall constitute an offense and shall subject the Contractor to penalties and/or liquidated damages pursuant to RA 9184 and its revised Implementing Rules and Regulations.

XII. CANCELLATION OR TERMINATION OF CONTRACT

The guidelines contained in RA 9184 and its revised IRR shall be followed in the termination of any service contract. In the event the City terminated the Contract due to default insolvent, or for cause, it may enter negotiated procurement pursuant to RA 9184 and its IRR.


Prepared by:

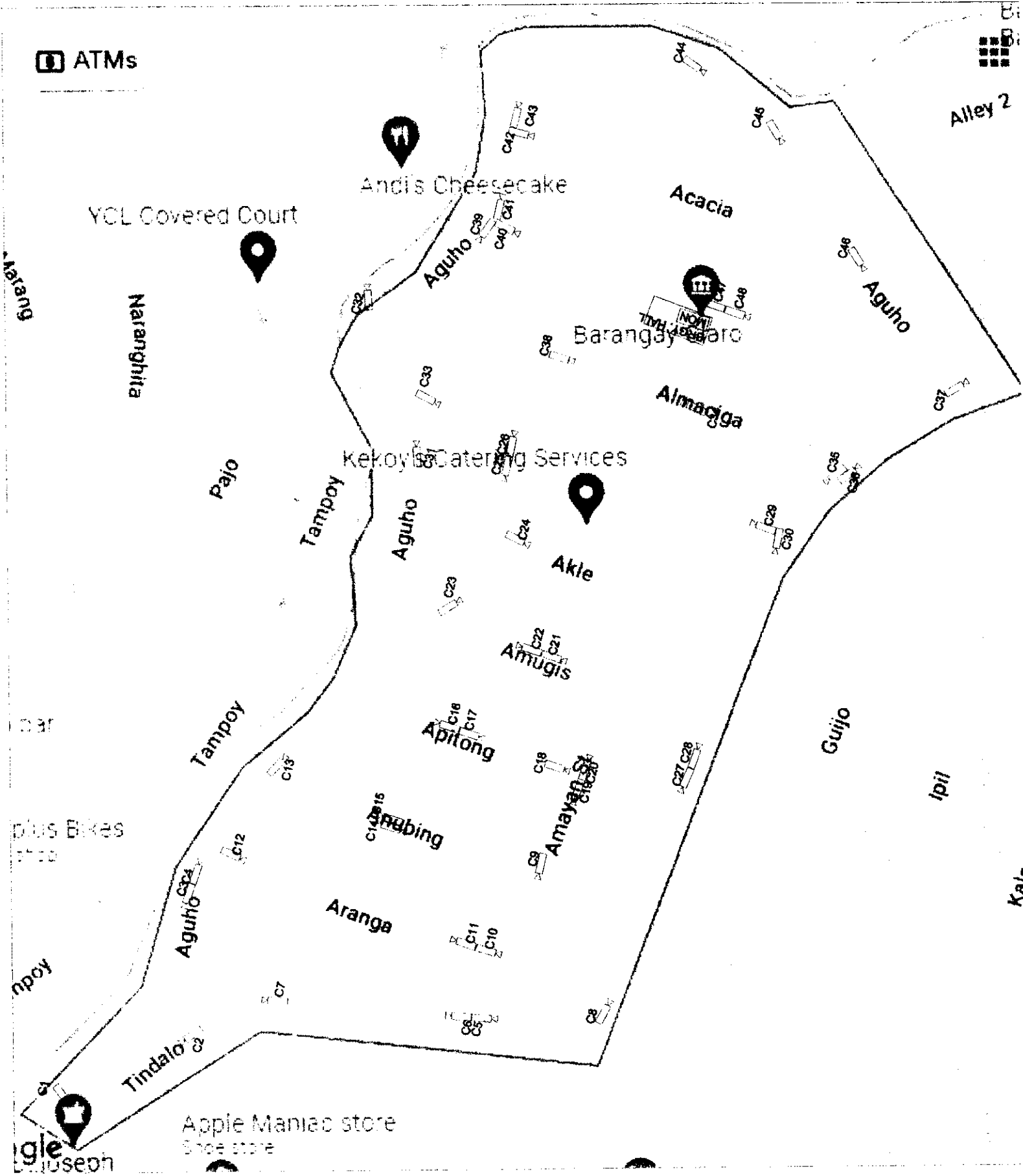

AMIEL JACOB P. PINPIN
Management and Audit Analyst II

Approved by:

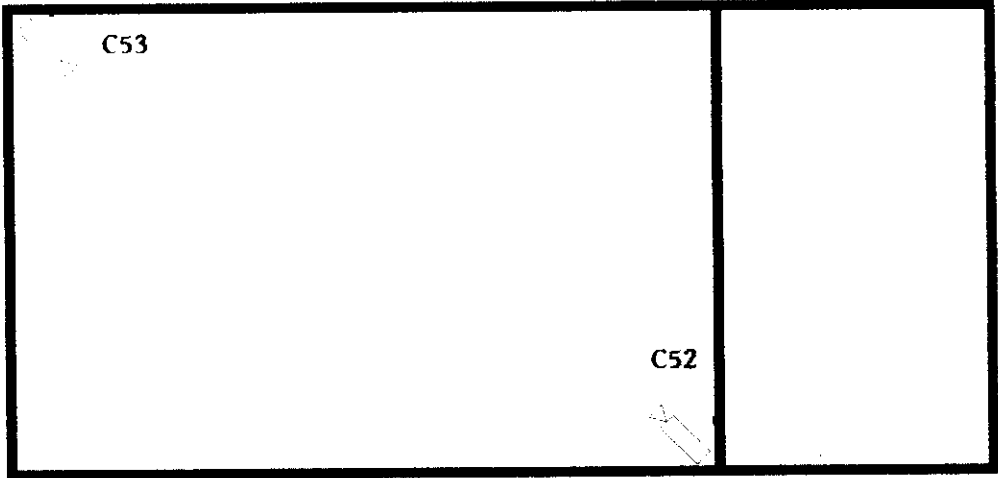

MICHAEL VICTOR N. ALIMURUNG
City Administrator

Recommending Approval and Reviewed by:

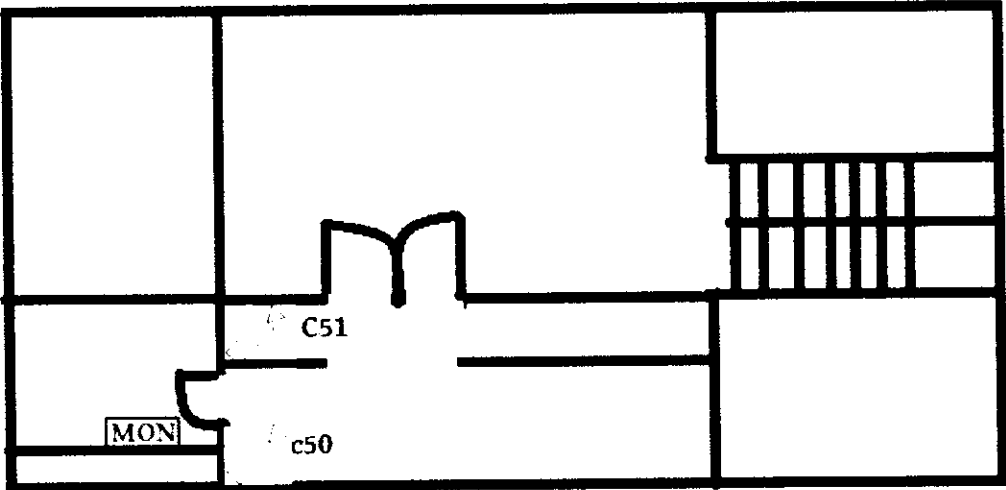

PAUL RENE S. PADILLA
Head, ITDD



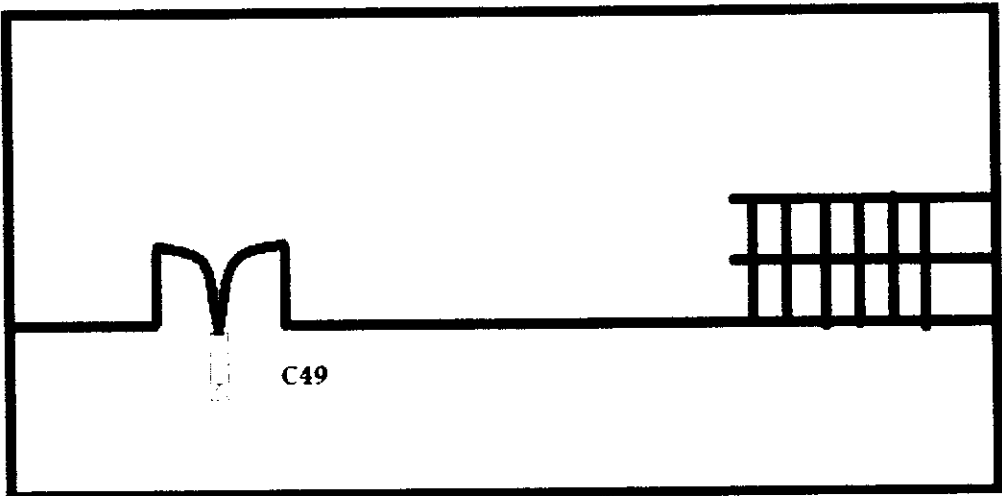
BARANGAY QUIRINO 3B - BARANGAY HALL CCTV LAYOUT



3rd Floor



2nd Floor



Ground Floor

Brgy. Hall

Brgy. Quirino 3-B (Claro), Quezon City CCTV Location

Annex B

CAM NO.	Recorder	Name
C1	RECORDER 1	ALONG ANONAS ST. NEAR CREEK (FACING ANONAS ST. SOUTH)
C2	RECORDER 1	TINDALO ST. COR. AGUHO ST. FACING TINDALO ST. (SOUTH)
C3	RECORDER 1	ALONG AGUHO ST. NEAR ARANGA ST. _1 (FACING NORTH)
C4	RECORDER 1	ALONG AGUHO ST. NEAR ARANGA ST. _2 (FACING SOUTH)
C5	RECORDER 1	TINDALO ST. COR. DAO ST. _1 (FACING EAST)
C6	RECORDER 1	TINDALO ST. COR. DAO ST. _2 (FACING WEST)
C7	RECORDER 1	ALONG TINDALO ST. (FACING WEST))
C8	RECORDER 1	NARRA ST. COR. TINDALO ST. FACING NARRA ST. NORTH
C9	RECORDER 1	AMAYAN ST. COR. ANUBING ST. FACING AMAYAN ST. SOUTH
C10	RECORDER 1	ALONG ARANGA ST. (FACING EAST) _1
C11	RECORDER 1	ALONG ARANGA ST. (FACING WEST) _2
C12	RECORDER 1	AGUHO ST. COR. ARANGA ST. FACING ARANGA ST. EAST
C13	RECORDER 1	AGUHO ST. COR. ANUBING ST. FACING AGUHO ST. NORTH
C14	RECORDER 1	ALONG ANUBING ST. (FACING EAST) _1
C15	RECORDER 2	ALONG ANUBING ST. (FACING WEST) _2
C16	RECORDER 2	ALONG APITONG ST.(FACING WEST) _1
C17	RECORDER 2	ALONG APITONG ST.(FACING EAST) _2
C18	RECORDER 2	ALONG APITONG ST.(FACING EAST)
C19	RECORDER 2	ALONG AMAYAN ST. NEAR APITONG _1 (FACING SOUTH)
C20	RECORDER 2	ALONG AMAYAN ST. NEAR APITONG _2 (FACING NORTH)
C21	RECORDER 2	ALONG AMUGIS ST.(FACING EAST) _1
C22	RECORDER 2	ALONG AMUGIS ST.(FACING WEST) _2
C23	RECORDER 2	INSIDE BASKETBALL COURT
C24	RECORDER 2	ALONG AKLE ST. (FACING EAST)
C25	RECORDER 2	ALONG AKLE ST. (FACING SOUTH)
C26	RECORDER 2	ALONG AKLE ST., FACING ANISLAG ST.
C27	RECORDER 2	ALONG NARRA ST. NEAR APF BUILDING _1 (FACING SOUTH)
C28	RECORDER 2	ALONG NARRA ST. NEAR APF BUILDING _2 (FACING NORTH)
C29	RECORDER 3	NARRA ST. COR. ANISLAG ST. FACING ANISLAG ST. (WEST)
C30	RECORDER 3	NARRA ST. COR. ANISLAG ST. FACING NARRA ST. (NORTH)
C31	RECORDER 3	ALONG AGUHO ST. (FACING NORTH)
C32	RECORDER 3	ALONG AGUHO ST. FACING CREEK
C33	RECORDER 3	AGUHO ST. COR. ANISLAG ST. FACING ANISLAG ST. (EAST)
C34	RECORDER 3	ALONG ALMACIGA ST. (FACING WEST)
C35	RECORDER 3	ALONG NARRA ST. NEAR ALMACIGA _1 (FACING SOUTH)
C36	RECORDER 3	ALONG NARRA ST. NEAR ALMACIGA _2 (FACING NORTH)
C37	RECORDER 3	NARRA ST. COR. AGUHO ST. FACING BRGY. AMIHAN
C38	RECORDER 3	ALONG ALMACIGA ST. (FACING EAST)
C39	RECORDER 3	AGUHO ST. COR. ALMON ST. FACING AGUHO ST. (SOUTH) _1
C40	RECORDER 3	AGUHO ST. COR. ALMON ST. FACING ALMON ST. (EAST) _2
C41	RECORDER 3	AGUHO ST. COR. ALMON ST. FACING AGUHO ST. (NORTH) _3
C42	RECORDER 3	AGUHO ST. COR. ACACIA, FACING AGUHO ST (NORTH) _1
C43	RECORDER 4	AGUHO ST. COR. ACACIA, FACING ACACIA ST (EAST) _2
C44	RECORDER 4	ALONG AGUHO ST. (FACING EAST)
C45	RECORDER 4	ALONG AGUHO ST. (FACING EAST)
C46	RECORDER 4	ALONG AGUHO ST. NEAR ACACIA ST. (FACING EAST)
C47	RECORDER 4	ALONG ALMON ST. NEAR BRGY HALL (FACING WEST) _1
C48	RECORDER 4	ALONG ALMON ST. NEAR BRGY HALL (FACING EAST) _2
C49	RECORDER 4	INSIDE BRGY HALL, GROUND FLOOR, ENTRANCE DOOR
C50	RECORDER 4	INSIDE BRGY HALL, SECOND FLOOR _1
C51	RECORDER 4	INSIDE BRGY HALL, SECOND FLOOR _2
C52	RECORDER 4	INSIDE BRGY HALL, THIRD FLOOR _1
C53	RECORDER 4	INSIDE BRGY HALL, THIRD FLOOR _2

ITEM NO.	TECHNICAL SPECIFICATION	QTY
1	<p>5MP FIXED IP BULLET CAMERA WITH SURGE PROTECTOR</p> <p>Sensor: 1/2.8" Black Light CMOS Min. Illumination : Color : 0.0001 Lux (F1.2,AGC on), 0 Lux with IR B/W :0.0001 Lux (F1.2,AGC on), 0 Lux with IR Camera should be able to capture and transmit an image size of 5MP (2592x1944) at 15fps Camera is intended to be a bullet style IR Range: 1*White Light, 1*Infrared Light, IR2: 20-30m Fixed Lens with focal length of 3.6mm Day & Night with an Infrared Cut Filter and with auto switch Shutter Time/Speed of 1/50(1/60)s to 1/10,000s Supports DWDR, 3D DNR Mobile Phone Remote Monitoring (iOS & Andriod) H.265AI/H.265+ (compatible H.265/H.264) high profile Alarm: Video Loss, Video Block, Human Detect, Motion Detection, Face Detection Bitrate of 0.1Mbps to 8Mbps Audio Compression G.711a Supports HVR/NVR, ONVIF Protocol Power Supply: 12V DC +/- 10%; PoE Ingress Protection: IP66 Operating Temperature/Humidity: -10°C to +60°C/10% to 90% RH Network Storage Must include PoE Network Surge Protector with RJ45 Interface</p>	53 SETS
2	<p>32 CHANNEL 4K NETWORK VIDEO RECORDER WITH 12TB HDD STORAGE</p> <p>System: Embedded Linux Video Input: 32 ch Decode: H.265AI/H.265+/H.265/H.264 1*HDMI Output; 1*VGA Output 1* RJ45 10/100/1000Mbps Ethernet port 2*SATA Interface (up to 8TB) Supports DHCP, FTP, DNS, DDNS, NTP, UPNP, Email, 3G, Wifi, IP Search, Alarm Center Mobile remote monitoring Multi browser access Can integrate seamlessly with QC Government existing Command Center 6TB Surveillance Grade SATA 6 Gb/s Interface 3.5 inch Form Factor Cache (MB) 128 or better Interface transfer rate (max): Host to/from drive (sustained) : 175 MB/s</p>	4 SETS
3	<p>46" LED VIDEO WALL MONITOR</p> <p>Type: LED Support up to 1,920 x 1,080 resolution High contrast ratio 4000 : 1 Fast response time 8ms or better Minimum (1) HDMI and (1) VGA Video Inputs RJ45 Ethernet Input Viewing Angle (H/V): 178 deg/178 deg Functions: VESA Compatible Panel Life (MTBF): 50,000 hrs</p>	4 SETS
	<p>REMOTE COMMUNICATION BOX</p> <ul style="list-style-type: none"> - 4 PORT INDUSTRIAL POE SWITCH - AUTOMATIC VOLTAGE CURRENT PROTECTOR - SURGE PROTECTOR <p>Power Distribution Board, Isolation and Protection for Equipment and AC Surge Protection. The size of the PDB shall be constructed such that it will fit in the power supplies if needed, surge protectors, and other components For outdoor use, the PDB shall be designed for outdoor installation and can withstand all types of weather conditions. The PDB must include a circuit breaker for tapping of main power source and It should provide protection against residual current Each line output shall have at least one-pole circuit breakers to provide protection against over-current and short circuit AC Surge Protection applicable for protecting AC220-240V Min surge current of 6000A, Min surge voltage of 6000V Must include Automatic Voltage Current Protector with the following features: 10 sec Power On Delay 230V-300V Over Voltage Protection voltage</p>	

4	<p>1-63A Over-Current Protection</p> <p>PoE Switch with the following features:</p> <p>At least 4-10/100Base-TX PoE ports + 2-100/1000Base-X uplink SFP ports</p> <p>Gigabit SFP optical fiber interface</p> <p>Network Protocol: IEEE802.3, IEEE802.3i, IEEE802.3u, IEEE802.3ab, IEEE802.3z</p> <p>Forward Mode: Store and Forward</p> <p>Switching Capacity (Bandwidth): 12 Gbps or better</p> <p>Packet Forwarding 8.93 Mpps or better</p> <p>MAC 2K or better</p> <p>Buffer Memory: 2M</p> <p>Total Power/Input Voltage: at least 60W/48VDC</p> <p>4G Outdoor Wireless Router</p> <p>DDR2 128M Byte RAM; 16MB Flash Storage</p> <p>Supports 10/100M (WAN) port * 1, can connect xDSL modems/cable modems/Internet</p> <p>Supports 10/100M (LAN) port * 1, supports Auto MDI/MDIX</p> <p>Antenna Frequency: 2412 – 2472 MHz</p> <p>Antenna Polarization: Vertical/Horizontal</p> <p>Antenna Gain: 5 Dbi</p> <p>Support all-network 4G; Built-In 4G Antenna</p> <p>Supports 2.4G, Output power up to 500mW</p> <p>Supports 64/128 bit WEP encryption</p> <p>Supports customized SSD and encryption</p> <p>Supports 300Mbps bandwidth</p> <p>Industrial DIN Rail Power Adapter with the following features</p> <p>48 VDC Output Voltage</p> <p>2.5 A Output Rated Current</p> <p>120 W Output Rated Power</p> <p>Voltage Input: AC 100-240V</p> <p>-40 deg C to 70 deg C Operating Temperature Range</p> <p>Supports protection from short circuit, over current, over voltage</p>	11 SETS
5	<p>CORE SWITCH INCLUDING 42U 600*800 CLOSED DATA CABINET, UPS, PATCH PANELS AND ACCESSORIES</p> <p>8*10/100/1000BASE-T RJ45 ports</p> <p>24*100/1000BASE-X SFP ports</p> <p>4*1/10G SFP+ fiber slot ports</p> <p>1*Console rs232 port</p> <p>Network Management Type: L2+ or better</p> <p>Network Protocol: IEEE802.3 10BASE-T, IEEE802.3i 10BASE-T, IEEE802.3u 100BASE-TX, IEEE802.3ab 1000BASE-T, IEEE802.3z 1000BASE-X, IEEE802.3ac 10GBASE-SR/LR, IEEE802.3x</p> <p>Forwarding Mode: Store and Forward</p> <p>Switching Capacity: 598Gbps</p> <p>Forwarding Rate @ 64 byte: 107.14Mpps</p> <p>MAC:32K</p> <p>Buffer Memory: 32M</p> <p>Jumbo Frame: 9.6K</p> <p>Certification: CE, RoHS</p> <p>Dimensions: 42U * 600mm * 800mm</p> <p>Glass front door and perforated rear double door</p> <p>RAL9004 Black Color</p> <p>Includes the following components and accessories:</p> <ul style="list-style-type: none">- Horizontal Wire Management- Vertical Wire Management- 24-port CAT5E Patch Panel- Power Distribution Unit(s)- Fixed Trays- Screws and Nuts with Cushion, Cross Type <p>Capacity (VA): at least 1000 VA</p> <p>Capacity (Watts): at least 600W</p> <p>Form: Tower Type</p> <p>Input Nominal Voltage: 220/230/240VAC</p> <p>Input Voltage Range: 165 -300VAC</p> <p>Input Frequency Range: 50Hz/60Hz (Auto Sensing)</p> <p>Output Voltage: 220/230/240 VAC</p> <p>Output Frequency Range: 50/60 Hz +/- 1 Hz</p> <p>Transfer Time (ms): 2-4 (Typical)</p> <p>Waveform: Simulated Sine Wave</p>	1 SET
	<p>16-PORT POE SWITCH WITH PATCH PANEL AND ACCESSORIES</p> <p>16*10/100BASE-TX PoE Ports</p> <p>2*10/100/1000BASE-T Uplink RJ45 ports</p> <p>1*1000Base-X SFP Fiber port</p>	

6	<p>Network Protocol: IEEE802.3 10BASE-T, IEEE802.3i 10BASE-T, IEEE802.3u 100BASE-TX, IEEE802.3ab 1000BASE-T, IEEE802.3z 1000BASE-X, IEEE802.3x</p> <p>Forwarding Mode: Store and Forward</p> <p>Switching Capacity: 14.8Gbps</p> <p>Forwarding Rate @ 64 byte: 6.55Mpps</p> <p>MAC:16K</p> <p>Buffer Memory: 4M</p> <p>Jumbo Frame: 10K</p> <p>Certification: CE, RoHS</p> <p>Includes the following components and accessories:</p> <ul style="list-style-type: none"> - Horizontal Wire Management - 24-port CAT5E Patch Panel - Fixed Tray - Screws and Nuts with Cushion, Cross Type 	1 SET
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