T ECHNICAL & OPERATIONAL DOCUMENTATION

Network Infrastructure

Scope of Work

Comprehensive Structured Cabling, Scope of Work
(SOW) for Pakistan High Commission London Buildings 35-36 and 34

Network Infrastructure, Cabling & Security Solution

1. Introduction

This bid proposal outlines the scope of works, equipment supply, network solution, costs, support services, and data security architecture for the proposed network infrastructure upgrade. The objective is to deliver a secure, reliable, and scalable network solution suitable for a diplomatic and operational environment, ensuring high availability, performance, and strong data protection and removal of old cables.

2. Scope of Works – Structured Cabling

The proposed network infrastructure follows a **distributed hierarchical network architecture**, providing a reliable, scalable, and high-performance structured cabling system across all buildings. Each building and floor will be equipped with appropriately sized **24-port and 48-port managed network switches**, selected according to the number of required network outlets and future expansion requirements.

The structured cabling installation shall be carried out throughout **Building 35–36, Building 34, and the Marquee Area**, covering all designated floors and office locations. All horizontal cabling shall be installed using **Category 6 (Cat 6) UTP cable**, supporting Gigabit Ethernet and future network requirements.

Please note that the Scope of Works may be amended following the site survey, depending on the actual site conditions and technical requirements identified during the assessment.

3. The scope of work includes:

- Installation of Cat 6 structured cabling to all designated network outlets.
- Installation of network points for desktop computers, printers, and Wi-Fi Access Points.
- Installation of wall-mounted network cabinets.
- Installation and termination of Cat 6 patch panels and network faceplates included wall outlest.
- **All wall outlets shall be dual-port (double-port) RJ45 network outlets**, with both ports terminated using Category 6 (Cat 6) cabling and clearly labeled to facilitate and tested.
- Complete labelling of all cables, patch panels, outlets, and network cabinets in accordance with international structured cabling standards.

- Testing and certification of every network cable using a calibrated cable certification tester, with test reports provided upon completion.
- Supply and installation of cable management accessories, trunking, conduits, patch cords, and all necessary installation materials.
- **All patch panels installed on each floor shall be interconnected with the Main Server Room patch panel via dedicated fibre optic backbone cables**, providing high-speed connectivity between buildings and floors. Fibre links shall be properly terminated, tested, labeled, and certified to ensure reliable backbone communication.

The completed installation shall provide a secure, organized, and standards-compliant network infrastructure capable of supporting current operational requirements while allowing for future network expansion with minimal additional infrastructure changes.

4. Cabling Schedule

Building	Floor	Cable Quantity / connection port
HC Office	Chancery hall & First floor	14 + 3 AP's
Building 35–36	Basement	38
Building 35–36	Ground and First	26 + 4 AP's
Building 35–36	Second	24 + 1AP
Building 35–36	Third	18 + 2AP's
Building 35–36	Fourth	36 + 2AP's
Marquee	Outside	2 + 1AP
Building 34	Basemen	22
Building 34	Ground, Mid and First	20
Building 34	Second, Third and Fourth	32 + 1AP

4.1 Structured Cabling Installation

- Cable Specification: All horizontal drops must be executed using premium Cat6 UTP/SFTP copper infrastructure supporting gigabit speeds up to the patch panel interfaces.
- Double-Port Outlets: Dual RJ-45 faceplates must be cleanly flush-mounted or surface-mounted using durable containment paths within each designated office room.
- Pathways & Containment: Installation of metal cable trays, heavy-duty PVC conduits, and micro-trunking across corridors to shield paths from mechanical and electromagnetic interference.
- All existing cabling needs to be removed after the deployment of switches.

5. Removal of Existing Cabling

Upon successful installation, testing, and commissioning of the new network infrastructure, the contractor shall remove all obsolete network cabling, redundant patch panels, unused patch cords, and any associated network components that have been replaced by the new installation. The removal shall be undertaken only after the new network has been fully commissioned and accepted to ensure there is no disruption to High Commission operations. All removed materials shall be safely disposed of or handed over to the High Commission, as directed by the Project Manager. All cable routes, cabinets, and work areas shall be cleaned and restored to a neat and professional condition upon completion.

6. Contractor Eligibility and Qualification Requirements

To ensure the successful delivery of the project, the bidding contractor shall meet the following minimum eligibility criteria:

- The contractor shall be a **United Kingdom (UK)-based company** with a minimum of **five (5) years of proven experience** in Information Technology (IT), structured cabling, and network infrastructure installation.
- The contractor **must be VAT registered** in the United Kingdom and provide a valid VAT registration number with the tender submission.
- The contractor shall demonstrate proven expertise in the design, installation, configuration, and commissioning of network infrastructure.

- The contractor shall provide evidence of successfully completing **at least five (5) network infrastructure projects** of comparable size and complexity within the last five years.
- The contractor shall demonstrate adequate **financial capability** by providing audited financial statements or certified accounts showing an **annual turnover of not less than £100,000** for the most recent financial year.
- The contractor shall provide a minimum **12-month warranty** covering all workmanship, cabling installations, and supplied equipment (or longer where supported by the manufacturer's warranty).
- The contractor shall comply with all applicable UK health and safety regulations, industry standards, and relevant structured cabling standards throughout the project.

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