

1. SCOPE OF WORKS

The selected vendor shall provide end-to-end supply, installation, configuration, testing and commissioning of the network switching, fiber optic infrastructure and IP surveillance system at the 5000TPD Building, in accordance with Annex 1.

1. Fiber optic link and passive network installation

- Supply and install approximately 100 meters of 4-core OS2 9/125µm single-mode, central-tube, single-armored PE-jacketed fiber optic cable along the approved underground route from Hulhumalé Operations Center Control Room to Hulhumalé 5000TPD Building.
- Install two fully loaded 4-core rack-mounted mini ODFs (LC/UPC) at the respective ends, including pigtails and adapters.
 - Splice and terminate all four fiber cores, install LC/UPC duplex patch cords, and provide protected, orderly cable routing with proper bend radius and strain relief.
 - Route underground cable in appropriate weatherproof protection along approved pathways and label fiber cores, patch cords and ODF ports.
 - Perform end-to-end continuity and optical loss testing on all cores and submit results and as-built route confirmation.
 - Install the 9U switch rack at the 5000TPD Building, with appropriate cable management and grounding.

2. HPE Aruba switching installation and integration

- Supply, rack-mount and commission one HPE Aruba CX 6300M 48-port Class 4 PoE switch (JL661A) and two 10G LR SFP+ transceivers (J9151E), including required power, console, grounding and network cables.
- Configure access/trunk VLANs, switch ports and uplinks as directed by MWSC; integrate with the existing distribution and network security environment.
- Verify transceivers, uplink connectivity, switch ports and network services before production commissioning.

3. IP CCTV installation and commissioning

- Supply and install twenty-eight (28) outdoor 4K bullet network cameras manufactured by AXIS or Hikvision and meeting the minimum technical requirements in Annex 1, at approved 5000TPD Building locations, including mounting, CAT6 cabling, termination, dressing and labeling.
- Install outdoor CAT6 runs in PVC pipe, conduit or suitable weatherproof cable duct according to site conditions. Route and terminate cabling at the designated switch rack.
- Configure each camera with MWSC-provided IP addresses and verify connectivity, live video feed and correct operation. Complete commissioning and handover confirmation.
- Submit installation records, camera/port schedule, switch configuration details, fiber test results and as-built cable route documentation.

4. Warranty and technical support

- HPE hardware and software: provide three (3) years of 24x7 hardware replacement and support
- AXIS or Hikvision cameras: provide three (3) years of 24x7 hardware replacement and support. Support and replacement equipment shall be provided through the offered manufacturer's authorized channel.
- Fiber optic cable and passive components: provide a one (1) year warranty against manufacturing and workmanship defects. Repair or replace defective materials at no additional cost. All supplied goods must be genuine and from authorized channels.

5. Delivery and installation

- Deliver all goods within sixty (60) calendar days following contract signing and complete installation within thirty (30) days following site readiness.

6. Acceptance

- MWSC acceptance is subject to successful switch and network integration, end-to-end fiber tests, operational verification of all twenty-eight cameras, correct labeling and approved handover documentation.
- The contractor shall coordinate site works with MWSC, protect existing facilities and minimize operational disruption.

7. Contractor responsibilities

- The contractor shall supply all equipment, materials, certified personnel, tools, installation accessories, testing, commissioning, documentation and support necessary to deliver the complete specified system.

2. BILL OF MATERIAL & REQUIREMENTS

#	Description	Qty
2.1	HPE Aruba Networking CX 6300M 48-port 1GbE Class 4 PoE and 4-port SFP56 Switch – JL661A	01 Nos
2.2	HPE Aruba Networking 10G SFP+ LC LR 10km SMF Transceiver – J9151E	02 Nos
2.3	4-core Single-Mode OS2 9/125µm fiber optic cable; central tube, single armored, single PE jacket; estimated length 100m	01 Lot
2.4	Fully loaded 4-core 1U rack-mount mini ODF – LC/UPC SMF OS2, including 4 × 1m LC/UPC OS2 pigtails and 4 × LC/UPC SMF adapters per unit	02 Nos
2.5	OS2 9/125µm single-mode duplex fiber patch cord, LC/UPC–LC/UPC, yellow jacket, 2m	04 Nos
2.6	Outdoor 4K Bullet Network Camera — AXIS or Hikvision only Acceptable reference models: AXIS P1468-LE; Hikvision DS-2CD2686G2T-IZSY (2.8–12 mm), DS-2CD2686G2-IZS (2.8–12 mm), or a current model from the same accepted manufacturer that meets or exceeds every minimum requirement. Minimum requirements: 8 MP / 3840 × 2160 resolution at not less than 25 fps; motorized varifocal lens approximately 2.8–13.5 mm with remote zoom and focus; horizontal field of view approximately 108° to 46° or better; true day/night; integrated IR illumination of at least 40 m; wide dynamic range of at least 120 dB; H.264 and H.265 compression with multiple configurable streams; ONVIF Profile S and T compatibility; built-in human and vehicle classification analytics; microSD/SDXC edge-storage support; PoE; minimum IP66 outdoor protection and IK10 vandal resistance; operating temperature suitable for the installation environment, with a minimum rated range of –30°C to +60°C. The offered model shall be genuine, sourced through an authorized channel, and supported by a project-specific Manufacturer’s Authorization Letter from AXIS or Hikvision referring to the RFP/project reference number. Other camera brands are not acceptable.	28 Nos
2.7	9U Switch Rack	01 Nos
2.8	Professional services – HPE Aruba switching: rack installation, certified engineers, VLAN/port/uplink configuration, network integration, testing and commissioning	01 Lot
2.9	Professional services – passive fiber network: underground route between Hulhumalé Operations Center Control Room and 5000TPD Building, fiber laying, ODF installation, splicing, testing, labeling and as-built documentation	01 Lot

#	Description	Qty
2.10	Professional services – CCTV: mounting and configuring 28 cameras, CAT6 cabling, outdoor conduit protection, termination, labeling, video testing and handover	01 Lot
2.11	Warranty and technical support: HPE 3 years 24x7; offered AXIS or Hikvision cameras 3 years support through the manufacturer’s authorized channel; passive fiber 1 year	01 Lot
2.12	Delivery within 60 calendar days after contract signing; installation within 30 days upon site readiness	01 Lot
2.13	Minimum qualifications: Maldives-registered, 100% Maldivian shareholding; project-specific HPE Aruba Manufacturer’s Authorization Letter and project-specific Manufacturer’s Authorization Letter from the offered camera manufacturer (AXIS or Hikvision), each referring to the RFP/project reference number; two projects above MVR 200,000 each within the past three years (one HPE Aruba network project and one AXIS or Hikvision IP surveillance project); mandatory tender documents	01 Lot