



Installation of Dark Fiber Link between RO Annex and Borehole Office

1. SCOPE OF WORKS

The selected vendor shall provide end-to-end supply, installation, configuration, testing and commissioning of the dark fiber link between RO Annex and Borehole Office, associated HPE Aruba switching equipment, UPS and fiber termination works in accordance with **2. Bill of Material & Requirement**

1. Fiber optic route and passive network installation
2. Supply and lay approximately 620 meters of six-core steel-tape-armoured, water-resistant G.652D (9/125 μm) single-mode fiber optic cable between RO Annex and Borehole Office along the approved route. Obtain all permits and approvals from relevant authorities.
 - Install fully loaded rack-mount ODF units at RO Annex and Borehole Office; install the 12U switch rack and cable management at Borehole Office.
 - Fusion splice and terminate all six fiber cores at both ends using the supplied pigtailed, adapters and patch leads; protect splices and manage all fiber connections.
 - Install and dress fiber patch cords and cables according to approved routes and industry best practices. Protect cable runs, maintain appropriate bend radius and strain relief, and label all routes, terminations and ports.
 - Test all fiber cores and provide documented results, route drawings, fiber access points, termination details and cable labels.
 - Install APC Smart-UPS units in the Borehole Office switch rack as required under Annex 1 and verify proper operation.
3. HPE Aruba switch configuration and integration
 - Unpack, rack, power and configure the HPE Aruba 6100 switch, including all necessary power, Ethernet, console and management cabling. Use certified network engineers for on-site implementation.
 - Assess compatibility with the existing distribution network and configure applicable VLANs, 802.1Q trunking and VLAN pruning, STP/RSTP/MSTP, and LACP as specified by MWSC.
 - Test switch connectivity and network service functionality and commission the access switch into production following MWSC approval.
 - Testing, handover and knowledge transfer

4. Provide as-built drawings, cable route and access point records, ODF/port labeling records, switch configuration details and testing/commissioning documentation.
- Verify the complete RO Annex to Borehole Office dark fiber link, all six fiber cores, installed equipment and network integration before handover.
- Provide technical knowledge transfer on the installed solution and support transition to MWSC operations.
- Supply genuine, new hardware and materials sourced through authorized channels, including all labor, equipment and accessories necessary for completion.

Warranty and technical support

5. Warranty and technical support
 - Provide three (3) years of HPE hardware replacement
 - Replace defective equipment at the bidder's own cost, including transportation, and maintain a local support plan for the warranty period.
 - Delivery and installation
 - Deliver all goods within forty (40) calendar days following contract signing and complete installation within twenty (20) days following site readiness.
6. Acceptance
 - MWSC acceptance is subject to satisfactory fiber-core testing, operational switch/network testing, installed equipment verification, proper cable management and submission of approved as-built documents.
 - The bidder is responsible for securing permissions and coordinating works to minimize disruption to MWSC operations.
 - Contractor responsibilities
 - The contractor shall supply and install all specified materials and provide certified personnel, tools, permits, testing, commissioning, training and documentation required for a complete functioning link.

2. BILL OF MATERIAL & REQUIREMENTS

#	Description	Qty
Installation of Dark Fiber Link between RO Annex and Borehole Office Bundle solution includes:		
2.1	HPE Aruba 6100 48G Class4 PoE 4SFP+ Switch – JL675A	01 Nos
2.2	Aruba 1G SFP+ LC LR 10Km SMF Transceiver	02 Nos
2.3	APC Smart-UPS Rackmount – SMT1000RMI2UC	02 Nos
2.4	12U Switch Rack, including 01 × cable management	01 Nos
2.5	Fully loaded rack-mounted ODF with splice tray: 06 duplex LC (SC-type) panel; 19-inch sliding cold-rolled steel enclosure; loaded duplex LC adapters; 02 × 1 m six-fiber LC single-mode colour-coded unjacketed pigtails; 06 × 1 m LC/LC duplex single-mode bend-insensitive PVC patch cables, 0.12 dB insertion loss.	02 Nos
2.6	Steel-tape-armoured water-resistant fiber cable; six (06) cores; single-mode G.652D (9/125 μm).	620 m
2.7	Professional services – HPE Aruba access network installation, configuration, compatibility assessment, VLAN/802.1Q, STP/RSTP/MSTP, LACP, security/network integration, testing, commissioning, as-built documentation and knowledge transfer. Refer to Section 3.	1 Lot
2.8	Professional services – passive fiber network installation, authority permissions, laying, splicing, ODF termination, rack and UPS installation, patch cords, testing of all cores, labeling and route documentation. Refer to Section 3.	01 Nos
2.9	Warranty and technical support – three (3) years HPE replacement/support	01 Nos
2.10	Delivery and installation – maximum 40 calendar days for delivery after contract signing, followed by installation within 20 days upon site readiness.	01 Lot
2.11	Vendor minimum qualifications and proposal requirements – Maldivian registration and 100% local shareholding; HPE Aruba MAL; two HPE Aruba project references above MVR 170,000.00 each completed within the past three years; completed forms, certificates and supporting documents in Section 2	01 Lot