

Detailed Technical Specification for Procurement of Control Office Equipment (COE)

Reference: CLW Spec. No. CLW/C-D&D/ES/3/0554.			
Project: Procurement, Supply, Installation, and Commissioning of Control Office Equipments (COE) for setting up Data Retrieval and Analytics Systems (DRAS) for 3-Phase Electric Locomotives at Electric Loco Shed, Valsad (ELS/BL).			
The following details the specifications and quantities for the items to be procured. The makes and models mentioned are indicative of the required quality and features; equivalent or superior models from the specified or other reputable manufacturers are acceptable			
Sr.No	Description	Qty	Unit
1.	Situation Awareness Display System (SADS) The SADS is intended to provide a large-format visual interface for real-time monitoring		
1.1	LED TFT Large Screen with HDMI input, An 85" LED-backlit TFT screen with HDMI interface Make: Samsung (Model QB85CIN) or equivalent in Sony/LG. Key Features: a)Resolution: 3840x2160 (UHD-4K) b)Brightness: 350 nit (Typical) c) Operation: 16x7 continuous operation, Landscape/Portrait modes *Connectivity: HDMI (3), USB (2), Auto Source Switching *Processor: Quantum processor 4K with HDR Support *Warranty: 3 Years On-Site	2	Nos
1.2	Computer Work Station PC with HDMI output, A high-performance PC to drive the SADS displays, complete with remote management software. A monitor is not required for this item. Make: Dell or equivalent in HP/Acer. Specifications: * Processor: Intel Core i7, 14th Generation *RAM: 32 GB of DDR5 RAM *Storage: 2 TB NVMe Gen4 SSD and 1 TB Enterprise Storage Drive *Graphics: RTX 4070 Super 12 GB *OS: Windows 11 Professional *Peripherals: DVD Writer, KVM Switch *PSU: 700W Power Supply *Warranty: 3 Years OEM On-Site Warranty. Note:- Ensure the workstation motherboard includes a 2.5 Gbps LAN port instead of a standard 1 Gbps port.	2	Nos
2	Data Analysis Work Station (DAWS)		
2.1	Computer Work Station PC with HDMI output. A high-performance PC for data analysis. A monitor is to be procured separately (see item 2.2). Make: Dell or equivalent in HP/Acer. Specifications: *Processor: Intel Core i7, 14th Generation. * RAM: 32 GB of DDR5 RAM. *Storage: 2 TB NVMe Gen4 SSD and 1 TB Enterprise Storage Drive.*Graphics: RTX 4070 Super 12 GB.*OS: Windows 11 Professional. *Peripherals: DVD Writer, KVM Switch.* PSU: 700W Power Supply. * Warranty: 3 Years OEM On-Site Warranty. Note:- Ensure the workstation motherboard includes a 2.5 Gbps LAN port instead of a standard 1 Gbps port.	2	Nos
2.2	24" FHD/QHD Monitor. A 24" Full HD Monitor. Make: Dell (Model SE 2425H) or equivalent in HP/Samsung.	4	Nos
2.3	MS Office License Microsoft Office FPP (Full Packaged Product)	2	Nos

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	License, which must be transferrable.		
2.4	A3 Colour Laser Printer An A3 Colour Laser Printer. Make: HP (Model M72625DN) or equivalent in Epson/Brother.	1	Nos
3	Remote Office Communications and Asset Management This includes all necessary networking and communication hardware		
3.1	WAN Router, Make/Model: TP-Link Archer AX23 AX1800 Dual-Band Wi-Fi 6 Router or equivalent. Note:- The router shall be Wi-Fi 6E compatible	1	Nos
3.2	Firewall/VPN Device Make/Model: TP-Link ER605 (TL-R605) Multi-WAN Wired VPN Router or equivalent with SPI Firewall and Omada SDN integration	1	Nos
3.3	Network Switch Make/Model: TP-LINK make Managed 16-Port Gigabit Switch or equivalent	1	Nos
3.4	Network Attached Storage (NAS) Make/Model: Synology Disk Station DS224+ or equivalent, with adequate capacity for data backup. Note:- It should be populated with NAS-specific Hard Drives	1	Nos
3.5	NAT Edge Processor Make/Model: MOXA NAT-102 or equivalent.	1	Nos
3.6	Integrated Services Router. Make/Model: CISCO 4000 series	1	Nos
3.7	VOIP based handset Make/Model: Cisco 8841 VoIP Phone	1	Nos
3.8	UPS for Rack Equipment A 1 KVA UPS for power supply distribution and conditioning for the rack equipment. Make: APC or Microtek.	1	Nos
4.	Racks, Power Conditioning, and Mobile Devices		
4.1	Network Rack A 19" Network Rack, 17U, 600x600mm. It must be a complete combo pack with a PDU (6 Sockets), Server Tray, Cable Organizer, 4 Fans, and Hardware Kit. Make: MASS-RACK or equivalent in Netfox/D-LINK.	1	No
4.2	Power Conditioning Equipment An Online UPS 5.5 KVA, 192V, 1-Phase (IN/OUT). Make: Microtek or APC	1	No.
4.3	Smartphones with SADS Apps Make/Model: Samsung Galaxy A35/A36 5G (8/256 GB) or Google Pixel 7A/8A (8/128 GB). Note:- Smart-phones shall be supplied along with Original OEM fast charger (25W or higher), Back cover and tempered glass if not included in the standard OEM package.	4	Nos
5.	Modular Furniture. To be supplied and configured as a T-shaped workstation		
5.1	Penta Work Station Make: Godrej Wish or equivalent in AFC Furniture/Neelkamal. Configuration: *T-shaped workstation (5'x5' per side), Tile Based System (50mm main spine, 25mm return), 1200mm height. Must include a whiteboard tile, fabric magnetic tiles, and integrated wire	1	Nos

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	<p>management conduits. Work surface to be 25mm thick prelam particle board.</p> <p>* Intermediate blocks fabric, Bottom tile metal wire management-switch cutouts to be provided on the blocks/bottom tile. Vertical movement of wires through conduits provided in the panel understructure-MS powder coated (2Nos in 15 set for T shaped work station).</p> <p>* All interconnecting wiring of LAN, Power supply and telephones shall be done inside the cable management system and adequate ports shall be provided on the work surface. The minimum number of spare ports, per work area (after fitting all specified equipment) required are given below:-</p> <p>a) LAN RJ45:- 02 Nos.</p> <p>b) Telephone, RJ11:- 2 Nos</p> <p>c) Power supply, 5A sockets:- 3 No</p> <p>Note:- The requirement shall be double for a T-shaped workstation.</p> <p>* All wires shall be brought out to interface boxes one for power supply and another for the communication cables. These boxes shall be designed to accept connections from the control room circuits.</p>		
5.2	Pedestals A metal, free-standing, 3-drawer pedestal with central locking (approx. 390mm W x 435mm D x 646mm H). 3 drawer 2 box + 1 file (2Nos in 1 set for T shaped work station)	1	Nos
5.3	Chairs (Type 1): Model: Thrill Mesh Back type. Features: 1D Adjustable Armrests, Centre Tilt Synchro Mechanism, Nylon Pedestal, 3 position locking	2	Nos
5.4	Chairs (Type 2): Model: Pulse Chair type. Features: Adjustable Lumbar Pad, Adjustable Seat Height, 4-Position Locking KTS Mechanism, Adjustable Armrest, Nylon Pedestal.	3	Nos
6	<p>Scope of Work and General Requirements</p> <p>* Turnkey Solution: The scope includes the supply, transportation, installation, fitment, and commissioning of all specified items (SADS, DAWS, Furniture, Networking Equipment, etc.) to create a fully functional system.</p> <p>* Wiring & Integration: The contractor is responsible for all inter-connecting wiring (LAN, Power, HDMI, etc.). All wiring for the workstation must be concealed within the furniture's cable management system. Adequate ports (minimum 2 LAN, 2 Telephone, 3 Power sockets per work area) shall be provided on the work surface.</p> <p>Note:- Concealed cable trench/ducts shall be provided by the supplier between equipments.</p> <p>* Warranty: All equipment shall have a minimum of the OEM-specified warranty, which must be passed on to the buyer. On-site warranty is required for key components like PCs and Displays as specified above.</p> <p>Apart from above mentioned the Entire workmanship shall be guaranteed for a minimum of 12 months for excellent functioning of system as a whole.</p> <p>* Compliance: All mains-powered equipment must be compliant with</p>		

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	UL 60950 for electrical safety and be suitable for operation in non-air-conditioned office environments. *Documentation: The contractor must provide all original user manuals, warranty cards, and software licenses		
7	Payment Terms: 80% payment after successful commissioning of the Unit as a whole and 20% after the completion of warranty period. The Supplier will have the option to release 100% payment after commissioning after submit FDR/BG equivalent to 20% of the PO value.		

Note:- All Spares shall be procured from respective OEMs or OEM authorized dealers and Purchase proof of the same shall be submitted while commissioning.


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