Bid Number: GEM/2025/B/5814743
Dated: 14-02-2025

Bid Corrigendum

GEM/2025/B/5814743-C15

Following terms and conditions supersede all existing “Buyer added Bid Specific Terms and conditions” given in the bid document or any previous corrigendum. Prospective bidders are advised to bid as per following Terms and Conditions:

Buyer Added Bid Specific Additional Terms and Conditions

1. OPTION CLAUSE: The Purchaser reserves the right to increase or decrease the quantity to be ordered up to 25 % of bid quantity at the time of placement of contract. The purchaser also reserves the right to increase the ordered quantity up to 25% of the contracted quantity during the currency of the contract at the contracted rates. The delivery period of quantity shall commence from the last date of original delivery order and in cases where option clause is exercised during the extended delivery period the additional time shall commence from the last date of extended delivery period. The additional delivery time shall be (Increased quantity ÷ Original quantity) × Original delivery period (in days), subject to minimum of 30 days. If the original delivery period is less than 30 days, the additional time equals the original delivery period. The Purchaser may extend this calculated delivery duration up to the original delivery period while exercising the option clause. Bidders must comply with these terms.
2. Buyer Added text based ATC clauses

   Corrigendum-3

   The corrigendum-3 is attached in ATC Document.

   Corrigendum-2/ Response to the Pre-Bid Queries

   The corrigendum-2/ response to the pre-bid queries is attached in ATC Document.

   Corrigendum-1/ Response to the Pre-Bid Queries

   The corrigendum, response to the pre-bid queries is attached in ATC Document. The revised BoQ is availa ble on the QCI website under tender section (https://qcin.org/work-with-us/ at Sl. No 6.2). The bidders are suggested to submit their financial bid as per the revised BoQ. Bids submitted in old BoQ shall be rejected .

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   1. Performance Security: The selected Bidder shall submit irrevocable Performance security, within 15 days from the Notification of award, for a value equivalent to 5% of the contract value. The Performance s ecurity submitted in the form of Bank Guarantee shall contain a claim period of three months from the las t date of validity. The bank guarantee shall be valid for the period of 15 months from the date of issuance of work order plus three (03) months of claim period. The selected Bidder shall be responsible for extendi ng the validity date and claim period of the Performance Bank Guarantee as and when it is due on account of non-completion of the delivery and Warranty period. The physical copy of Performance Guarantee shoul d be submitted at QCI-HO within 15 days from the notification of award. In case the selected bidder fails to submit a Performance Guarantee within the time stipulated, QCI at its discretion may cancel the order pla ced on the selected bidder without giving any notice. QCI shall invoke the performance guarantee in case the selected bidder fails to discharge their contractual obligations during the period or QCI incurs any loss due to bidder’s negligence in carrying out the project implementation as per the agreed terms & condition s.

   2. **Payment Milestones**:

QCI will make payment to the vendor as per the following milestones:

S. No.	Milestone	Payment Schedule
1	On successful Supply , Installation, Testing and Commissioning at site .	75%
2	On successful User Acceptance including Go-Live upto the satisfaction of Client	20%
3	Completion of Defects Liability Period of 12 months	5%

a) Payment shall be made after submission of invoices within 30 days of receipt of invoice complete in all respect.
b) Incorrect Invoices, Under/Over Payment: In case an invoice is found to have been rendered incorrectly after payment, any underpayment or overpayment will be recoverable by or from the vendor, as the case may be, and, without limiting recourse to other available means, may be offset against any amount subsequently due by QCI to the vendor under this contract.

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3. Buyer uploaded ATC document Click here to view the file.

Disclaimer

The additional terms and conditions have been incorporated by the Buyer after approval of the Competent Authority in Buyer Organization, whereby Buyer organization is solely responsible for the impact of these clauses on the bidding process, its outcome, and consequences thereof including any eccentricity / restriction arising in the bidding process due to these ATCs and due to modification of technical specifications and / or terms and conditions governing the bid. If any clause(s) is / are incorporated by the Buyer regarding following, the bid and resultant contracts shall be treated as null and void and such bids may be cancelled by GeM at any stage of bidding process without any notice:-

1. Definition of Class I and Class II suppliers in the bid not in line with the extant Order / Office Memorandum issued by DPIIT in this regard.
2. Seeking EMD submission from bidder(s), including via Additional Terms & Conditions, in contravention to exemption provided to such sellers under GeM GTC.
3. Publishing Custom / BOQ bids for items for which regular GeM categories are available without any Category item bunched with it.
4. Creating BoQ bid for single item.
5. Mentioning specific Brand or Make or Model or Manufacturer or Dealer name.
6. Mandating submission of documents in physical form as a pre-requisite to qualify bidders.
7. Floating / creation of work contracts as Custom Bids in Services.
8. Seeking sample with bid or approval of samples during bid evaluation process. (However, in bids for attached categories, trials are allowed as per approved procurement policy of the buyer nodal Ministries)
9. Mandating foreign / international certifications even in case of existence of Indian Standards without specifying equivalent Indian Certification / standards.
10. Seeking experience from specific organization / department / institute only or from foreign / export experience.
11. Creating bid for items from irrelevant categories.
12. Incorporating any clause against the MSME policy and Preference to Make in India Policy.

13. Reference of conditions published on any external site or reference to external documents/clauses.
14. Asking for any Tender fee / Bid Participation fee / Auction fee in case of Bids / Forward Auction, as the case may be.

Further, if any seller has any objection/grievance against these additional clauses or otherwise on any aspect of this bid, they can raise their representation against the same by using the Representation window provided in the bid details field in Seller dashboard after logging in as a seller within 4 days of bid publication on GeM. Buyer is duty bound to reply to all such representations and would not be allowed to open bids if he fails to reply to such representations.

*This document shall overwrite all previous versions of Bid Specific Additional Terms and Conditions.

This Bid is also governed by the General Terms and Conditions

भारतीय गुणवत्ता परिषद्
द्वितीय तल, इंस्टीट्यूशन ऑफ इंजीनियर्स भवन,
२, बहादुर शाह जफर मार्ग, नई दिल्ली - ११०००२
Quality Council of India
2nd Floor, Institution of Engineers Building,
2, Bahadur Shah Zafar Marg, New Delhi - 110 002

BUYER ADDED BID SPECIFIC TERMS AND CONDITIONS

Name of the work: "Supply, Installation, Testing and Commissioning of IT systems at QCI Office, WTC, Nauroji Nagar, New Delhi"

GeM Bid No: GEM/2025/B/5814743

The bid is governed by the terms and conditions in the following order of precedence (i.e in case of same clause, the clause mentioned in Corrigendum 1, Corrigendum 2 and Corrigendum 3 will supersede the clause mentioned in RFP)

- Corrigendum 3
- Corrigendum 2 and Response to pre-bid queries
- Corrigendum 1 and Response to pre-bid queries
- Original RFP

भारतीय गुणवत्ता परिषद्
द्वितीय तल, इंस्टीट्यूशन ऑफ इंजीनियर्स भवन,
२, बहादुर शाह जफर मार्ग, नई दिल्ली - ११०००२
Quality Council of India
2nd Floor, Institution of Engineers Building,
2, Bahadur Shah Zafar Marg, New Delhi - 110 002

Date: February 14, 2025

Corrigendum - Request for Proposal for Supply, Installation, Testing and Commissioning of IT systems at QCI Office, WTC, Nauroji Nagar, New Delhi

Corrigendum-3

This is with reference to the GeM bid reference no. GEM/2025/B/5814743 and RFP ref. no. QCI/IT/0125/404 "**Request for Proposal for Supply, Installation, Testing and Commissioning of IT systems at QCI Office, WTC, Nauroji Nagar, New Delhi**"

Below are the changes in mentioned clauses issued vide this corrigendum notification:

S. no.	Description/ S. no./ Page no./ Reference	Original Clause	Revised Clause (Deletion are indicated with a strikethrough and addition are highlighted by an underline)
1	**Page no. 34 – S. no. 42, Page no. 38 – S. no. 12.1, Page no. 42 – S. no. 12.1, Page no. 46 – S. no. 12.1, Page no. 54 – S. no. 12.1, Page no. 58 – S. no. 12.1, Page no. 68 – S. no. 6**	All switches, WiFi, WLC, Transceivers, AAA should be from the same OEM for better interoperability, management and support	~~All switches, WiFi, WLC, Transceivers, AAA should be from the same OEM for better interoperability, management and support~~ **All switches, WiFi, WLC, Transceivers, AAA from the same OEM may be preferred. However, if the bidder proposes the items from different OEMs, in that case the bidder shall be fully responsible for ensuring overall solutioning, support and warranty and compatibility among the installed items being procured from different OEMs.**
2	**Page 69**	Make In India OEM Letter, should be class 1 MII.	Make In India OEM Letter, should be class 1 **or class 2 MII**.

Date: February 13, 2025

Corrigendum - Request for Proposal for Supply, Installation, Testing and Commissioning of IT systems at QCI Office, WTC, Nauroji Nagar, New Delhi

Corrigendum-2

This is with reference to the GeM bid reference no. GEM/2025/B/5814743 and RFP ref. no. QCI/IT/0125/404 "**Request for Proposal for Supply, Installation, Testing and Commissioning of IT systems at QCI Office, WTC, Nauroji Nagar, New Delhi**"

Below are the changes in mentioned clauses issued vide this corrigendum notification:

S. no.	Description/ S. no./ Page no./ Reference	Original Clause	Revised Clause (Deletion are indicated with a strikethrough and addition are highlighted by an underline)
1	Form 5: Certificate of Compliance of Specifications - Core switch S. no. 17, Page no 33	Switch should support 512 or more STP Instances.	Switch should support **256** or more STP Instances
2	Form 5: Certificate of Compliance of Specifications - Core switch S. no. 8.1, Page no 36 Core switch	Priority Queue Management using Weighted Round Robin (WRR), Strict Priority (SP), and a combination of WRR and SP	Priority Queue Management using Weighted Round Robin (WRR), Strict Priority (SP), **or** a combination of WRR and SP
3	Form 5: Certificate of Compliance of Specifications - Core switch S. no. 8.1, Page no 36 Core switch	Priority for PFC	~~Priority for PFC~~
4	Form 5: Certificate of Compliance of Specifications - Core switch S. no. 8.1, Page no 40 Core switch	Priority Queue Management using Weighted Round Robin (WRR), Strict Priority (SP), and a combination of WRR and SP	Priority Queue Management using Weighted Round Robin (WRR), Strict Priority (SP), **or** a combination of WRR and SP
5	Form 5: Certificate of Compliance of Specifications - Core switch S. no. 8.1, Page no 44 Core switch	Priority Queue Management using Weighted Round Robin (WRR), Strict Priority (SP), and a combination of WRR and SP	Priority Queue Management using Weighted Round Robin (WRR), Strict Priority (SP), **or** a combination of WRR and SP
6	Form 5: Certificate of Compliance of Specifications - Core switch S. no. 8.1, Page no 49 Core switch	Priority Queue Management using Weighted Round Robin (WRR), Strict Priority (SP), and a combination of WRR and SP	Priority Queue Management using Weighted Round Robin (WRR), Strict Priority (SP), **or** a combination of WRR and SP
7	Form 5: Certificate of Compliance of Specifications - Core switch S. no. 8.1, Page no 53 Core switch	Priority Queue Management using Weighted Round Robin (WRR), Strict Priority (SP), and a combination of WRR and SP	Priority Queue Management using Weighted Round Robin (WRR), Strict Priority (SP), **or** a combination of WRR and SP

Date: 13.02.2025

Response to pre-bid queries

S. no.	Clause no Page no.	Original Clause in the RFP	The point on which clarification required	Reason for amendment.	Response
1	Clause no 9, Page no 32 Core switch	Switch should have 24 Ports of 1/10G SFP+, 4 Ports of 1/10G SFP+ or 4 ports of 25G SFP28 and 2 x 40G or 1 x 100G QSFP28 Uplink/Stacking Ports from Day 1. Switch should support total of 4 x 40G QSFP28 or 1 x 100G QSFP28 Ports in future by installing the interface module.	Kindly amend the clause as " Switch should have 24 Ports of 1/10G SFP+ ports and 4 x 25G SFP28 uplink ports"	Uplink ports should be clearly defined from Day 1, there are multiple uplink port type mentioned in the cause.	Product with minimum specifications as per BoQ or with higher specifications shall be accepted
2	Clause no 10, Page no 33 Core switch	III. Switch should support aggregated stacking bandwidth of 2000Gbps or more.	OEM specific clause.	Request to remove the clause	Product with minimum specifications as per BoQ or with higher specifications shall be accepted
3	Clause no 13, Page no 33 Core switch	Switch shall have minimum 1Tbps of switching fabric and 800 Mbps of forwarding rate.	Request to amend the clause as " Switch shall have minimum 680Gbps of switching fabric and 505 Mbps of forwarding rate.	Switching capacity should be calculated based on the no of ports like (24 x 10 x 2 + 4 x 25 x 2) = 680Gbps and forwarding capacity calculations should be 240+100*1.488=505MPPS.	Product with minimum specifications as per BoQ or with higher specifications shall be accepted
4	Clause no 14, Page no 33 Core switch	Switch shall have minimum 96K MAC Addresses and 4000 VLAN.	Request to amend the clause as "Switch shall have minimum 32K MAC Addresses and 4000 VLAN"	Campus network for 1500 users and 150 Network devices, while considering 4 device per user, it will not go beyond 6000 MAC and if we consider 100% increase in the user the total no of MAC address will come around 12K.	Product with minimum specifications as per BoQ or with higher specifications shall be accepted

5	Clause no 15, Page no 33 Core switch	Should support minimum 90K IPv4 and 8K IPv6 routes or more	Request to amend the clause as " Should support minimum 60K IPv4 and 20K IPv6 routes or more	90K IPv4 routes generally required on ISP network to manage multiple clients network, campus network generally not required such huge numbers of network Routes, hence request to amend the clause.	Product with minimum specifications as per BoQ or with higher specifications shall be accepted
6	Clause no 17, Page no 33 Core switch	Switch should support 512 or more STP Instances.	Request to amend the clause as " Switch should support 64 or more STP Instances.	Core switch runs on Layer 3 network and STP is Layer 2 protocol, which might not required on core switch, STP generally configure on access switch which is an layer 2 network, hence request to amend the clause.	Please read the revised clause as "**Switch should support 256 or more STP Instances.**"
7	Clause no 24, Page no 33 Core switch	Switch should support RSPAN, ER-SPAN, LLDP, Configuration Archive, Replace & Roll Back.	Request to amend the clause as " Switch should support SPAN/RSPAN/ ER-SPAN, LLDP, Configuration Archive, Replace & Roll Back.	Similar functions should be accepted in the clause.	Product with minimum specifications as per BoQ or with higher specifications shall be accepted
8	Clause no 31, Page no 33 Core switch	Switch must support Open Flow 1.3 or latest for SDN (Software Defined Networking), REST API, Ansible for automation	Request to amed the clause as "Switch must support Open Flow 1.3 or latest for SDN (Software Defined Networking)/REST API, Ansible for automation"	Proposed switch supports REST API for SDN integrations.	Product with minimum specifications as per BoQ or with higher specifications shall be accepted
9	Clause no 39, Page no 34 Core switch	Switch shall conform to TEC EMI EMC Standard EN/IEC 61000-4-2, EN61000-4- 3, EN61000-4-4, EN61000-4-5, EN 61000-4-6, EN 61000-4-11, EN 61000-4-29 Annex B and ROHS 6.	Switch shall conform to TEC EMI EMC Standard EN/IEC 61000-4-2, EN61000-4- 3, EN61000-4-4, EN61000-4-5, EN 61000-4-6, EN 61000-4-11, EN 61000-4-8 Annex B and ROHS 6.	Proposed switch supports 6100-4-8 which is power standard for magnetic field.	Product with minimum specifications as per BoQ or with higher specifications shall be accepted

10	Clause no 2.1, Page no 34 Core switch	Access Switch should provide 48 x 10/100/1G RJ45 Ports and 4x 1G/10G/25G SFP+ Slots, for Stacking/Uplinks, from Day 1.	Access Switch should provide 48 x 10/100/1G RJ45 Ports and 4x 1G/10G SFP+ Slots, for Stacking/Uplinks, from Day 1.	Core switch downlink ports don't support 25G port speed, hence request to amend theclause.	Product with minimum specifications as per BoQ or with higher specifications shall be accepted
11	Clause no 2.2, Page no 34 Core switch	Should support Virtual Switching System (VSS) or Virtual Chassis (VC) or Virtual Switching Extension (VSX) or equivalent Switch Clustering/Stacking feature, where the Switch Clustering feature should combine multiple switches into a single network element. Switch should support aggregated stacking bandwidth of 1000Gbps or more and 10 switches per stack or more.	Request to amend the clause as "Should support Virtual Switching System (VSS) or Virtual Chassis (VC) or Virtual Switching Extension (VSX) or equivalent Switch Clustering/Stacking feature, where the Switch Clustering feature should combine multiple switches into a single network element. or more and 8 switches per stack or more"	10Switch stack with 1000G aggregated bandwidth is OEM specific clause.	Product with minimum specifications as per BoQ or with higher specifications shall be accepted
12	Clause no 3.1, Page no 35 Core switch	Should provide Switch Fabric Bandwidth Capacity of 296 Gbps, or more.	Should provide Switch Fabric Bandwidth Capacity of 128 Gbps, or more.	24 x 1 x 2 + 4 x 10 x 2= 128Gbps	Product with minimum specifications as per BoQ or with higher specifications shall be accepted
13	Clause no 3.2, Page no 35 Core switch	Should provide Packet Forwarding Capacity of 220 Mpps, or more.	Should provide Packet Forwarding Capacity of 95 Mpps, or more.	24 + 4 x 10 *1.488= 95MPPS	Product with minimum specifications as per BoQ or with higher specifications shall be accepted
14	Clause no 4.2, Page no 35 Core switch	Should support 16K IPv4 routes and 4K IPv6 routes, or more.	Should support 2K IPv4 routes and 1K IPv6 routes, or more.	Access switch don't need 16K ipv4 routes, 2K routes are more than sufficient for access switch, hence request to amend the clause.	Product with minimum specifications as per BoQ or with higher specifications shall be accepted
15	Clause no 6.5, Page no 35 Core switch	802.1ad (Q-in-Q) tagging	Request to remove the clause	Q-IN-Q is required in ISP network to serve multiple clients.	Product with minimum specifications as per BoQ or with higher specifications shall be accepted

16	Clause no 6.5, Page no 35 Core switch	Q-in-Q BPDU tunneling	Request to remove the clause	Q-IN-Q is required in ISP network to serve multiple clients.	Product with minimum specifications as per BoQ or with higher specifications shall be accepted
17	Clause no 6.5, Page no 35 Core switch	Selective Q-in-Q	Request to remove the clause	Q-IN-Q is required in ISP network to serve multiple clients.	Product with minimum specifications as per BoQ or with higher specifications shall be accepted
18	Clause no 6.8, Page no 36 Core switch	Unicast Reverse Path Forwarding (uRPF)	Request to amend the clause as " Unicast Reverse Path Forwarding (uRPF)/RPF		Product with minimum specifications as per BoQ or with higher specifications shall be accepted
19	Clause no 8.1, Page no 36 Core switch	Priority Queue Management using Weighted Round Robin (WRR), Strict Priority (SP), and a combination of WRR and SP	Request to amend the clause as " Priority Queue Management using Weighted Round Robin (WRR)DWRR, Strict Priority (SP),	Combination of SP and WRR is not supported on proposed switch, reuest to amend the clause.	Please read the revised clause as "**Priority Queue Management using Weighted Round Robin (WRR), Strict Priority (SP), or a combination of WRR and SP**"
20	Clause no 8.1, Page no 36 Core switch	Priority for PFC	Request to remove the clause		Please see the corrigendum-2.
21	Clause no 9.1, Page no 37 Core switch	Should support the following SDN features and functionality;	Should support the following SDN features and functionality;	Proposed switch support REST API for SDN integration.	No change. Product with minimum specifications as per BoQ or with higher specifications shall be accepted
22	Clause no 9.1, Page no 37 Core switch	OpenFlow v1.0 & v1.3	OpenFlow v1.0 & v1.3/REST API	Proposed switch support REST API for SDN integration.	No change. Product with minimum specifications as per BoQ or with higher specifications shall be accepted
23	Clause no 9.1, Page no 37 Core switch	Hybrid Switch Mode	Hybrid Switch Mode/REST API	Proposed switch support REST API for SDN integration.	No change. Product with minimum specifications as per BoQ or with higher specifications shall be accepted
24	Clause no 9.1, Page no 37 Core switch	Hybrid Port Mode	Hybrid Port Mode/REST API	Proposed switch support REST API for SDN integration.	No change. Product with minimum specifications as per BoQ or with higher specifications shall be accepted

25	Clause no 9.1, Page no 37 Core switch	Support for Multiple Controllers	Support for Multiple Controllers/REST API	Proposed switch support REST API for SDN integration.	No change. Product with minimum specifications as per BoQ or with higher specifications shall be accepted
26	Clause no 12.9, Page no 38 Core switch	The switch should have MTBF of >800K Hours at 25° C	The switch should have MTBF of >200K Hours at 25° C		Product with minimum specifications as per BoQ or with higher specifications shall be accepted
27	Clause no 2.1, Page no 38 Core switch	Access Switch should provide 48 x 10/100/1G RJ45 Ports and 4x 1G/10G/25G SFP+ Slots, for Stacking/Uplinks, from Day 1.	Access Switch should provide 48 x 10/100/1G RJ45 Ports and 4x 1G/10G SFP+ Slots, for Stacking/Uplinks, from Day 1.	Core switch downlink ports don't support 25G port speed, hence request to amend theclause.	No change. Product with minimum specifications as per BoQ or with higher specifications shall be accepted
28	Clause no 2.2, Page no 38 Core switch	Should support Virtual Switching System (VSS) or Virtual Chassis (VC) or Virtual Switching Extension (VSX) or equivalent Switch Clustering/Stacking feature, where the Switch Clustering feature should combine multiple switches into a single network element. Switch should support aggregated stacking bandwidth of 1000Gbps or more and 10 switches per stack or more.	Request to amend the clause as "Should support Virtual Switching System (VSS) or Virtual Chassis (VC) or Virtual Switching Extension (VSX) or equivalent Switch Clustering/Stacking feature, where the Switch Clustering feature should combine multiple switches into a single network element. or more and 8 switches per stack or more"	10Switch stack with 1000G agregrated bandwitdth is OEM specific clause.	Product with minimum specifications as per BoQ or with higher specifications shall be accepted
29	Clause no 3.1, Page no 39 Core switch	Should provide Switch Fabric Bandwidth Capacity of 248 Gbps, or more.	Should provide Switch Fabric Bandwidth Capacity of 128 Gbps, or more.	24 x 1 x 2 + 4 x 10 x 2= 128Gbps	Product with minimum specifications as per BoQ or with higher specifications shall be accepted
30	Clause no 3.2, Page no 39 Core switch	Should provide Packet Forwarding Capacity of 184 Mpps, or more.	Should provide Packet Forwarding Capacity of 95 Mpps, or more.	24 + 4 x 10 *1.488= 95MPPS	Product with minimum specifications as per BoQ or with higher specifications shall be accepted

31	Clause no 4.2, Page no 39 Core switch	Should support 16K IPv4 routes and 4K IPv6 routes, or more.	Should support 2K IPv4 routes and 1K IPv6 routes, or more.	Access switch don't need 16K ipv4 routes, 2K routes are more than sufficient for access switch, hence request to amend the clause.	Product with minimum specifications as per BoQ or with higher specifications shall be accepted
32	Clause no 6.5, Page no 39 Core switch	802.1ad (Q-in-Q) tagging	Request to remove the clause	Q-IN-Q is required in ISP network to serve multiple clients.	Product with minimum specifications as per BoQ or with higher specifications shall be accepted
33	Clause no 6.5, Page no 39 Core switch	Q-in-Q BPDU tunneling	Request to remove the clause	Q-IN-Q is required in ISP network to serve multiple clients.	Product with minimum specifications as per BoQ or with higher specifications shall be accepted
34	Clause no 6.5, Page no 39 Core switch	Selective Q-in-Q	Request to remove the clause	Q-IN-Q is required in ISP network to serve multiple clients.	Product with minimum specifications as per BoQ or with higher specifications shall be accepted
35	Clause no 6.8, Page no 40 Core switch	Unicast Reverse Path Forwarding (uRPF)	Request to amend the ckausde as " Unicast Reverse Path Forwarding (uRPF)/RPF		Product with minimum specifications as per BoQ or with higher specifications shall be accepted
36	Clause no 8.1, Page no 40 Core switch	Priority Queue Management using Weighted Round Robin (WRR), Strict Priority (SP), and a combination of WRR and SP	Request to amend the clause as " Priority Queue Management using Weighted Round Robin (WRR)DWRR, Strict Priority (SP),	Combination of SP and WRR is not supported on proposed switch, reuest to amend the clause.	Please read the revised clause as "**Priority Queue Management using Weighted Round Robin (WRR), Strict Priority (SP), or a combination of WRR and SP**"
37	Clause no 8.1, Page no 40 Core switch	Priority for PFC	Request to remove the clause		This Clause is deleted
38	Clause no 9.1, Page no 41 Core switch	Should support the following SDN features and functionality;	Should support the following SDN features and functionality;	Proposed switch support REST API for SDN integration.	No change. Product with minimum specifications as per BoQ or with higher specifications shall be accepted.
39	Clause no 9.1, Page no 41 Core switch	OpenFlow v1.0 & v1.3	OpenFlow v1.0 & v1.3/REST API	Proposed switch support REST API for SDN integration.	No change. Product with minimum specifications as per BoQ or with higher specifications shall be accepted.

40	Clause no 9.1, Page no 41 Core switch	Hybrid Switch Mode	Hybrid Switch Mode/REST API	Proposed switch support REST API for SDN integration.	No change. Product with minimum specifications as per BoQ or with higher specifications shall be accepted.
41	Clause no 9.1, Page no 41 Core switch	Hybrid Port Mode	Hybrid Port Mode/REST API	Proposed switch support REST API for SDN integration.	No change. Product with minimum specifications as per BoQ or with higher specifications shall be accepted.
42	Clause no 9.1, Page no 41 Core switch	Support for Multiple Controllers	Support for Multiple Controllers/REST API	Proposed switch support REST API for SDN integration.	No change. Product with minimum specifications as per BoQ or with higher specifications shall be accepted.
43	Clause no 12.9, Page no 42 Core switch	The switch should have MTBF of >800K Hours at 25° C	The switch should have MTBF of >200K Hours at 25° C		Product with minimum specifications as per BoQ or with higher specifications shall be accepted.
44	Clause no 2.1, Page no 42 Core switch	Access Switch should provide 48 x 10/100/1G PoE+ RJ45 Ports and with minimum 740 watts of PoE power budget and 4x 1G/10G/25G SFP+ Slots, for Stacking/Uplinks, from Day 1.	Access Switch should provide 48 x 10/100/1G PoE+ RJ45 Ports and with minimum 740 watts of PoE power budget and 4x 1G/10G SFP+ Slots, for Stacking/Uplinks, from Day 1.	Core switch downlink ports don't support 25G port speed, hence request to amend the clause.	No change. Product with minimum specifications as per BoQ or with higher specifications shall be accepted.
45	Clause no 2.2, Page no 43 Core switch	Should support Virtual Switching System (VSS) or Virtual Chassis (VC) or Virtual Switching Extension (VSX) or equivalent Switch Clustering/Stacking feature, where the Switch Clustering feature should combine multiple switches into a single network element. Switch should support aggregated stacking bandwidth of 1000Gbps or more and 10 switches per stack or more.	Request to amend the clause as "Should support Virtual Switching System (VSS) or Virtual Chassis (VC) or Virtual Switching Extension (VSX) or equivalent Switch Clustering/Stacking feature, where the Switch Clustering feature should combine multiple switches into a single network element. or more and 8 switches per stack or more"	10Switch stack with 1000G aggregated bandwidth is OEM specific clause.	Product with minimum specifications as per BoQ or with higher specifications shall be accepted.

46	Clause no 3.1, Page no 43 Core switch	Should provide Switch Fabric Bandwidth Capacity of 296 Gbps, or more.	Should provide Switch Fabric Bandwidth Capacity of 128 Gbps, or more.	24 x 1 x 2 + 4 x 10 x 2= 128Gbps	Product with minimum specifications as per BoQ or with higher specifications shall be accepted.
47	Clause no 3.2, Page no 43 Core switch	Should provide Packet Forwarding Capacity of 220 Mpps, or more.	Should provide Packet Forwarding Capacity of 95 Mpps, or more.	24 + 4 x 10 *1.488= 95MPPS	Product with minimum specifications as per BoQ or with higher specifications shall be accepted.
48	Clause no 4.2, Page no 43 Core switch	Should support 16K IPv4 routes and 4K IPv6 routes, or more.	Should support 2K IPv4 routes and 1K IPv6 routes, or more.	Access switch don't need 16K ipv4 routes, 2K routes are more than sufficient for access switch, hence request to amend the clause.	Product with minimum specifications as per BoQ or with higher specifications shall be accepted.
49	Clause no 6.5, Page no 43 Core switch	802.1ad (Q-in-Q) tagging	Request to remove the clause	Q-IN-Q is required in ISP network to serve multiple clients.	Product with minimum specifications as per BoQ or with higher specifications shall be accepted.
50	Clause no 6.5, Page no 43 Core switch	Q-in-Q BPDU tunneling	Request to remove the clause	Q-IN-Q is required in ISP network to serve multiple clients.	Product with minimum specifications as per BoQ or with higher specifications shall be accepted.
51	Clause no 6.5, Page no 43 Core switch	Selective Q-in-Q	Request to remove the clause	Q-IN-Q is required in ISP network to serve multiple clients.	Product with minimum specifications as per BoQ or with higher specifications shall be accepted.
52	Clause no 6.8, Page no 43 Core switch	Unicast Reverse Path Forwarding (uRPF)	Request to amend the ckausde as " Unicast Reverse Path Forwarding (uRPF)/RPF		Product with minimum specifications as per BoQ or with higher specifications shall be accepted.
53	Clause no 8.1, Page no 44 Core switch	Priority Queue Management using Weighted Round Robin (WRR), Strict Priority (SP), and a combination of WRR and SP	Request to amend the clause as " Priority Queue Management using Weighted Round Robin (WRR)DWRR, Strict Priority (SP),	Combination of SP and WRR is not supported on proposed switch, reuest to amend the clause.	Please read the revised clause as "**Priority Queue Management using Weighted Round Robin (WRR), Strict Priority (SP), or a combination of WRR and SP**"
54	Clause no 8.1, Page no 44 Core switch	Priority for PFC	Request to remove the clause		This Clause is deleted

55	Clause no 9.1, Page no 45 Core switch	Should support the following SDN features and functionality;	Should support the following SDN features and functionality;	Proposed switch support REST API for SDN integration.	No change. Product with minimum specifications as per BoQ or with higher specifications shall be accepted.
56	Clause no 9.1, Page no 45 Core switch	OpenFlow v1.0 & v1.3	OpenFlow v1.0 & v1.3/REST API	Proposed switch support REST API for SDN integration.	No change. Product with minimum specifications as per BoQ or with higher specifications shall be accepted.
57	Clause no 9.1, Page no 45 Core switch	Hybrid Switch Mode	Hybrid Switch Mode/REST API	Proposed switch support REST API for SDN integration.	No change. Product with minimum specifications as per BoQ or with higher specifications shall be accepted.
58	Clause no 9.1, Page no 45 Core switch	Hybrid Port Mode	Hybrid Port Mode/REST API	Proposed switch support REST API for SDN integration.	No change. Product with minimum specifications as per BoQ or with higher specifications shall be accepted.
59	Clause no 9.1, Page no 45 Core switch	Support for Multiple Controllers	Support for Multiple Controllers/REST API	Proposed switch support REST API for SDN integration.	No change. Product with minimum specifications as per BoQ or with higher specifications shall be accepted.
60.	Clause no 12.9, Page no 46 Core switch	The switch should have MTBF of >800K Hours at 25° C	The switch should have MTBF of >200K Hours at 25° C		Product with minimum specifications as per BoQ or with higher specifications shall be accepted.
61	Clause no 2.1, Page no 46 Core switch	Access Switch should provide 24 x 10/100/1G PoE+ RJ45 Ports and with minimum 370 watts of PoE power budget and 4x 1G/10G/25G SFP+ Slots, for Stacking/Uplinks, from Day 1.	Access Switch should provide 24 x 10/100/1G PoE+ RJ45 Ports and with minimum 370 watts of PoE power budget and 4x 1G/10G SFP+ Slots, for Stacking/Uplinks, from Day 1.	Core switch downlink ports don't support 25G port speed, hence request to amend theclause.	No change. Product with minimum specifications as per BoQ or with higher specifications shall be accepted.

62	Clause no 2.2, Page no 47 Core switch	Should support Virtual Switching System (VSS) or Virtual Chassis (VC) or Virtual Switching Extension (VSX) or equivalent Switch Clustering/Stacking feature, where the Switch Clustering feature should combine multiple switches into a single network element. Switch should support aggregated stacking bandwidth of 1000Gbps or more and 10 switches per stack or more.	Request to amend the clause as "Should support Virtual Switching System (VSS) or Virtual Chassis (VC) or Virtual Switching Extension (VSX) or equivalent Switch Clustering/Stacking feature, where the Switch Clustering feature should combine multiple switches into a single network element. or more and 8 switches per stack or more"	10Switch stack with 1000G agregrated bandwitdth is OEM specific clause.	Product with minimum specifications as per BoQ or with higher specifications shall be accepted.
63	Clause no 3.1, Page no 43 Core switch	Should provide Switch Fabric Bandwidth Capacity of 296 Gbps, or more.	Should provide Switch Fabric Bandwidth Capacity of 128 Gbps, or more.	24 x 1 x 2 + 4 x 10 x 2= 128Gbps	Product with minimum specifications as per BoQ or with higher specifications shall be accepted.
64	Clause no 3.2, Page no 47 Core switch	Should provide Packet Forwarding Capacity of 220 Mpps, or more.	Should provide Packet Forwarding Capacity of 95 Mpps, or more.	24 + 4 x 10 *1.488= 95MPPS	Product with minimum specifications as per BoQ or with higher specifications shall be accepted.
65	Clause no 4.2, Page no 47 Core switch	Should support 16K IPv4 routes and 4K IPv6 routes, or more.	Should support 2K IPv4 routes and 1K IPv6 routes, or more.	Access switch don't need 16K ipv4 routes, 2K routes are more than sufficient for access switch, hence request to amend the clause.	Product with minimum specifications as per BoQ or with higher specifications shall be accepted.
66	Clause no 6.5, Page no 48 Core switch	802.1ad (Q-in-Q) tagging	Request to remove the clause	Q-IN-Q is required in ISP network to serve multiple clients.	Product with minimum specifications as per BoQ or with higher specifications shall be accepted.
67	Clause no 6.5, Page no 48 Core switch	Q-in-Q BPDU tunneling	Request to remove the clause	Q-IN-Q is required in ISP network to serve multiple clients.	Product with minimum specifications as per BoQ or with higher specifications shall be accepted.

68	Clause no 6.5, Page no 48 Core switch	Selective Q-in-Q	Request to remove the clause	Q-IN-Q is required in ISP network to serve multiple clients.	Product with minimum specifications as per BoQ or with higher specifications shall be accepted.
69	Clause no 6.8, Page no 48 Core switch	Unicast Reverse Path Forwarding (uRPF)	Request to amend the ckausde as " Unicast Reverse Path Forwarding (uRPF)/RPF		Product with minimum specifications as per BoQ or with higher specifications shall be accepted.
70	Clause no 8.1, Page no 49 Core switch	Priority Queue Management using Weighted Round Robin (WRR), Strict Priority (SP), and a combination of WRR and SP	Request to amend the clause as " Priority Queue Management using Weighted Round Robin (WRR)DWRR, Strict Priority (SP),	Combination of SP and WRR is not supported on proposed switch, reuest to amend the clause.	Please read the revised clause as "**Priority Queue Management using Weighted Round Robin (WRR), Strict Priority (SP), or a combination of WRR and SP**"
71	Clause no 8.1, Page no 49 Core switch	Priority for PFC	Request to remove the clause		This Clause is deleted
72	Clause no 9.1, Page no 49 Core switch	Should support the following SDN features and functionality;	Should support the following SDN features and functionality;	Proposed switch support REST API for SDN integration.	No change. Product with minimum specifications as per BoQ or with higher specifications shall be accepted.
73	Clause no 9.1, Page no 49 Core switch	OpenFlow v1.0 & v1.3	OpenFlow v1.0 & v1.3/REST API	Proposed switch support REST API for SDN integration.	No change. Product with minimum specifications as per BoQ or with higher specifications shall be accepted.
74	Clause no 9.1, Page no 49 Core switch	Hybrid Switch Mode	Hybrid Switch Mode/REST API	Proposed switch support REST API for SDN integration.	No change. Product with minimum specifications as per BoQ or with higher specifications shall be accepted.
75	Clause no 9.1, Page no 49 Core switch	Hybrid Port Mode	Hybrid Port Mode/REST API	Proposed switch support REST API for SDN integration.	No change. Product with minimum specifications as per BoQ or with higher specifications shall be accepted.
76	Clause no 9.1, Page no 49 Core switch	Support for Multiple Controllers	Support for Multiple Controllers/REST API	Proposed switch support REST API for SDN integration.	No change. Product with minimum specifications as per BoQ or with higher specifications shall be accepted.

77	Clause no 12.9, Page no 50 Core switch	The switch should have MTBF of >800K Hours at 25° C	The switch should have MTBF of >200K Hours at 25° C		Product with minimum specifications as per BoQ or with higher specifications shall be accepted.
78	Clause no 6.5, Page no 52 Core switch	802.1ad (Q-in-Q) tagging	Request to remove the clause	Q-IN-Q is required in ISP network to serve multiple clients.	Product with minimum specifications as per BoQ or with higher specifications shall be accepted.
79	Clause no 6.5, Page no 52 Core switch	Q-in-Q BPDU tunneling	Request to remove the clause	Q-IN-Q is required in ISP network to serve multiple clients.	Product with minimum specifications as per BoQ or with higher specifications shall be accepted.
80	Clause no 6.5, Page no 52 Core switch	Selective Q-in-Q	Request to remove the clause	Q-IN-Q is required in ISP network to serve multiple clients.	Product with minimum specifications as per BoQ or with higher specifications shall be accepted.
81	Clause no 6.8, Page no 52 Core switch	Unicast Reverse Path Forwarding (uRPF)	Request to amend the ckausde as " Unicast Reverse Path Forwarding (uRPF)/RPF		Product with minimum specifications as per BoQ or with higher specifications shall be accepted.
82	Clause no 8.1, Page no 53 Core switch	Priority Queue Management using Weighted Round Robin (WRR), Strict Priority (SP), and a combination of WRR and SP	Request to amend the clause as " Priority Queue Management using Weighted Round Robin (WRR)DWRR, Strict Priority (SP),	Combination of SP and WRR is not supported on proposed switch, reuest to amend the clause.	Please read the revised clause as "**Priority Queue Management using Weighted Round Robin (WRR), Strict Priority (SP), or a combination of WRR and SP**"
83	Clause no 8.1, Page no 53 Core switch	Priority for PFC	Request to remove the clause		This Clause is deleted
84	Clause no 9.1, Page no 53 Core switch	Should support the following SDN features and functionality;	Should support the following SDN features and functionality;	Proposed switch support REST API for SDN integration.	Product with minimum specifications as per BoQ or with higher specifications shall be accepted.
85	Clause no 9.1, Page no 53 Core switch	OpenFlow v1.0 & v1.3	OpenFlow v1.0 & v1.3/REST API	Proposed switch support REST API for SDN integration.	No change. Product with minimum specifications as per BoQ or with higher specifications shall be accepted.

86	Clause no 9.1, Page no 53 Core switch	Hybrid Switch Mode	Hybrid Switch Mode/REST API	Proposed switch support REST API for SDN integration.	No change. Product with minimum specifications as per BoQ or with higher specifications shall be accepted.
87	Clause no 9.1, Page no 53 Core switch	Hybrid Port Mode	Hybrid Port Mode/REST API	Proposed switch support REST API for SDN integration.	No change. Product with minimum specifications as per BoQ or with higher specifications shall be accepted.
88	Clause no 9.1, Page no 53 Core switch	Support for Multiple Controllers	Support for Multiple Controllers/REST API	Proposed switch support REST API for SDN integration.	No change. Product with minimum specifications as per BoQ or with higher specifications shall be accepted.
89	Clause no 12.9, Page no 55 Core switch	The switch should have MTBF of >800K Hours at 25° C	The switch should have MTBF of >200K Hours at 25° C		Product with minimum specifications as per BoQ or with higher specifications shall be accepted.
90	Clause no 5, Page no 60 Core switch	Wireless Controller should have minimum of 4 x 1Gigabit Ethernet & 4 x 10Gigabit Ports or more. 4x10G Multimode SFP+ transceivers to be supplied with the controller	Wireless Controller should have minimum of 4 x 1Gigabit Ethernet or 4 x 10Gigabit Ports or more. 4x10G Multimode SFP+ transceivers to be supplied with the controller	WLC will be connected to core switch and 4 ports are more than enough to conect WLC in HA mode, hence request to amend the clause.	Product with minimum specifications as per BoQ or with higher specifications shall be accepted.
91	Clause no 49, Page no 62 Core switch	The Controller or WLAN solution should support Wired network (Network Switch) & Wireless Access Point (Indoor & Outdoor) management from single management interface.	Request to remove the clause	OEM specific	Please Comply with Tender Specifications
92	Clause no 50, Page no 62 Core switch	The Controller or WLAN solution should support switch registration and authentication	Request to remove the clause	OEM specific	Please Comply with Tender Specifications
93	Clause no 51, Page no 62 Core switch	The Controller or WLAN solution should support Switch inventory (model, FW version, last backup, etc)	Request to remove the clause	OEM specific	Please Comply with Tender Specifications

94	Clause no 52, Page no 62 Core switch	The Controller or WLAN solution should support Health and performance monitoring (status, traffic stats, errors, clients etc) with alarms	Request to remove the clause	OEM specific	Please Comply with Tender Specifications
95	Clause no 53, Page no 62 Core switch	The Controller or WLAN solution should support switch Firmware Upgrade	Request to remove the clause	OEM specific	Please Comply with Tender Specifications
96	Clause no 53, Page no 62 Core switch	The Controller or WLAN solution should support Switch configuration file backup and restore	Request to remove the clause	OEM specific	Please Comply with Tender Specifications

भारतीय गुणवत्ता परिषद्
द्वितीय तल, इंस्टीट्यूशन ऑफ इंजीनियर्स भवन,
२, बहादुर शाह जफर मार्ग, नई दिल्ली - ११०००२
Quality Council of India
2nd Floor, Institution of Engineers Building,
2, Bahadur Shah Zafar Marg, New Delhi - 110 002

Date: February 05, 2025

Corrigendum - Request for Proposal for "Supply, Installation, Testing and Commissioning of IT systems at QCI Office, WTC, Nauroji Nagar, New Delhi".

Corrigendum-1

This is with reference to the GeM bid reference no. GEM/2025/B/5814743and RFP ref. no. QCI/IT/0125/404 "**Request for Proposal for Supply, Installation, Testing and Commissioning of IT systems at QCI Office, WTC, Nauroji Nagar, New Delhi**".

Below are the changes in mentioned clauses issued vide this corrigendum notification:

<table>
<tr><th>S. no.</th><th>Clause no./ Reference</th><th>Original Clause</th><th>Revised Clause (Deletion are indicated with a strikethrough and addition are highlighted by an underline)</th></tr>
<tr><td>1</td><td>Sub-clause 3 under Clause II: Scope of Work & Deliverables</td><td>In case the bidder is an OEM authorized reseller/local supplier, they shall procure the items mentioned in the BOQ from the OEMs as mentioned in the list of approved makes and technical specifications. The reseller/OEM shall strictly adhere to the specifications and any deviation in this regard will not be acceptable.</td><td><s>In case the bidder is an OEM authorized reseller/local supplier, they shall procure the items mentioned in the BOQ from the OEMs as mentioned in the list of approved makes and technical specifications. The reseller/OEM shall strictly adhere to the specifications and any deviation in this regard will not be acceptable.</s> <u>All bidders, whether Original Equipment Manufacturers (OEMs), authorized resellers, or local suppliers, must strictly adhere to the specifications detailed in the technical specifications section of the RFP. Any deviation from these specifications will not be acceptable. The list of approved makes or materials outlined in the RFP serves as base guideline for the project and is not exhaustive. OEMs fulfilling the requirements as per the technical specifications and equivalent quality standards, which is not listed above can participate in the bid. However, QCI reserves the right to choose any of the mentioned makes or any other preferred equivalent makes.</u></td></tr>
<tr><td>2</td><td>Clause 31: Payment Milestones</td><td><table><tr><th>S. No.</th><th>Milestone</th><th>Payment Schedule</th></tr><tr><td>1</td><td>On successful Supply, Installation, Testing and Commissioning at site .</td><td>75%</td></tr><tr><td>2</td><td>On successful User Acceptance including Go-Live upto the satisfaction of Client</td><td>20%</td></tr><tr><td>3</td><td>Completion of Defects Liability Period of 12 months</td><td>5%</td></tr></table></td><td><table><tr><th>S. No.</th><th>Milestone</th><th>Payment Schedule</th></tr><tr><td>1</td><td>On successful <s>Supply , Installation, Testing and Commissioning at site .</s> <u>sequential delivery of materials at site.</u></td><td><s>75%</s> <u>65%</u></td></tr><tr><td>2</td><td>On successful <u>Installation, Testing and Commissioning and</u> User Acceptance including Go- Live upto the satisfaction of Client</td><td><s>20%</s> <u>30%</u></td></tr><tr><td>3</td><td>Completion of Defects Liability Period of 12 months</td><td>5%</td></tr></table></td></tr>
<tr><td>3</td><td>Annexure-B</td><td colspan="2">The revised BoQ is available on the QCI website under tender section (https://qcin.org/work-with-us/ at Sl. No 6.2). The bidders are suggested to submit their financial bid as per the revised BoQ. Bids submitted in old BoQ shall be rejected.</td></tr>
</table>

भारतीय गुणवत्ता परिषद्
द्वितीय तल, इंस्टीट्यूशन ऑफ इंजीनियर्स भवन,
२, बहादुर शाह जफर मार्ग, नई दिल्ली - ११०००२
Quality Council of India
2nd Floor, Institution of Engineers Building,
2, Bahadur Shah Zafar Marg, New Delhi - 110 002

Response to pre-bid queries

Date: February 05, 2025

S. No.	Clause no., Page no.	Original clause in RFP Document	The point on which Clarification required	Reason for amendment (if any)	QCI's Responses
1	Page 5 Tender Summary Point no 3 " Delivery Period (including installation and commissioning)	75 calendar days	Extension of Delivery period	Considering the quantum of work and collaboration required for the SITC for quality work, we request to kindly reconsider and extend the delivery period to 90 Calendar days	RFP conditions shall remain unchanged.
2	Page 7 III. PRE-QUALIFICATION CRITERIA Point 3	The bidder or the OEM should be ISO 9001, ISO 14001, ISO 27001 or higher certified.	All Certification Mandatory?	As per ISO Standards ISO 27001 supersedes the other mentioned certificates hence only ISO 27001 can be accepted.	All certificates are mandatory. RFP conditions shall remain unchanged.
3	**Page 13 Clause 22 of** TERMS AND CONDITIONS **Exemption of EMD for MSEs/ Startups applicant**	"Micro and Small Enterprises (MSEs) as defined in MSE Procurement Policy issued by Department of Micro, Small and Medium Enterprises (MSME) and Startups as recognized by Department for Promotion of Industry and Internal Trade (DPIIT)" are exempted from submission of EMD (Bid security) in this tender	Clarification Regarding EMD Exemption	As per our understanding MSEs with DPIIT Certificate are exempted from EMD	Kindly refer **Clause 22: Exemption of EMD for MSEs/ Startups applicant:** Micro and Small Enterprises, and startups recognized by DPIIT are exempted for payment of EMD. However, MSEs with major activity as trading and Medium Category MSME firms are not under exemption from payment of EMD.
4	Page 8 Clause 4 Average Annual Turnover	The bidding entity must have minimum average annual turnover of ₹ 30 crores or more in the last three financial years (i.e., 2021-22, 2022-23 and 2023-24). ***The Turnover values displayed above shall prevail and supersede the turnover value displayed in the GeM Bid.**	Request you to kindly change the Average Annual Turnover as per GEM / CVC Guidelines as published in GEM bid. Kindly change average annual turnover of ₹ 30 crores or more to **₹ 10 Crore** or more as per GEM / CVC guidelines for turnover.	As per GEM turnover requirement it should be 40% of the bid value. As per CVC Guidelines Average Annual financial turnover during the last 3 years, ending 31st March of the previous financial year, should be at least 30% of the estimated cost. This clause is stopping us to participate in this bid. Request you to kindly change the same as per GEM / CVC guidelines.	RFP conditions shall remain unchanged.

5	Page 13 Point 21 Earnest Money Deposit (EMD)/ Bid Security	Security (EMD) of INR 15 lakhs as per the details mentioned below: i. By demand draft in favour of Quality Council of India, payable at New Delhi, or ii. Deposit through RTGS/ NEFT as detail under	Request you to kindly accept the EMD in other form also like BG. Also, please provide BG format or it will be same as GEM format, if EMD is acceptable in BG.	As the EMD amount is Rs 15 Lack, EMD in other form like BG should be allowed which is asked in all major bids from various Govt. tender. Also GEM bid consider for EMD in form of BG.	RFP conditions shall remain unchanged.
6	Page 13 Point 22 Exemption of EMD for MSEs/ Startups applicant:	Exemption of EMD for MSEs/ Startups applicant: "Micro and Small Enterprises (MSEs) as defined in MSE Procurement Policy issued by Department of Micro, Small and Medium Enterprises (MSME) and Startups as recognized by Department for Promotion of Industry and Internal Trade (DPIIT)" are exempted from submission of EMD (Bid security) in this tender.	Request you to kindly confirm that EMD exemption is applicable to MSME/ MSE bidders, who are not manufacture but a system integrator and service provider. Also, if bidder is registered in Uddyam in service category, EMD exemption will be applicable.	EMD is exempted in most of the PSUs/ Central Govt/ State Govt for MSME/ MSE bidders and service providers.	Kindly refer **Clause 22: Exemption of EMD for MSEs/ Startups applicant.** Micro and Small Enterprises, and startups recognized by DPIIT are exempted for payment of EMD. However, MSEs with major activity as trading and Medium Category MSME firms are not under exemption from payment of EMD.
7	Page 5 Point 3 Delivery Period	Delivery Period (including installation and commissioning) 75 calendar days	Request you to Kindly increase the delivery period to 120 Calendar days.	75 days is quite less to complete this type of projects. Delivery from various OEM take time and site readiness is also an important factor to be considered. Also LD clause should not be applicable if site is not ready.	RFP conditions shall remain unchanged.
8	Page 5 Point 4 & 5 Defects Liability Period & Warranty Period	Defects Liability Period: 12 calendar Months Warranty Period: Five (05) years OEM Warranty	Please confirm whether total warranty period is for 5 years including detect liability		DLP is 1 Year for System Integrator / Contractor & 5 years Warranty from OEM including 1st year of DLP Period
9	Page 8 Point 3 ISO Certification	The bidder or the OEM should be ISO 9001, ISO 14001, ISO 27001 or higher certified.	Request you to kindly remove ISO 14001 or make it optional as this is for environmental management systems (EMS) and not available with most of IT Vendors	ISO 14001 is stopping us to participate in this bid.	RFP conditions shall remain unchanged.

10	Page 15 Clause 31 Payment Terms	Payment Milestones: 31. Payment Milestones: QCI will make payment to the vendor as per the following milestones: Payment Schedule 1. On successful Supply, Installation, Testing and Commissioning at site: 75% 2. On successful User Acceptance including Go-Live up to the satisfaction of Client: 20% 3. Completion of Defects Liability Period of 12 months: 5%	Request you to Kindly change the payment terms as 1. On successful Supply and Inspection of material at site: 80% 2. On Installation, Testing and Go-Live: 20% As bidder have to submit PBG of 5%, request you to kindly remove this clause of holding 5% against Defect Liability.		Kindly refer Corrigendum-1
11	Warranty Period page No. 5	Five (05) years OEM Warranty	Please clarify the warranty period because at one place it is written 5 years and other place it is written 12 Months		DLP is 1 Year for System Integrator / Contractor & 5 years Warranty from OEM including 1st year of DLP Period
12	Warranty Page no.10	OEM support for such items (spare parts/ technical support) is to be provided for a minimum of 5 years after completion of Warranty period	Please clarify the warranty period because at one place it is written 5 years and other place it is written 12 Months		DLP is 1 Year for System Integrator / Contractor & 5 years Warranty from OEM including 1st year of DLP Period
13	Warranty Page No. 31	The Contractor/ Agency shall Warranty that all provided material and equipment will be free from defects, workmanship and will remain so, for a period of 12 months from after equipment/materials have put into the service or from date of final acceptance of system by Engineer In charge / Consultant whichever is earlier.	Please clarify the warranty period because at one place it is written 5years and other place it is written 12 Months		DLP is 1 Year for System Integrator / Contractor & 5 years Warranty from OEM including 1st year of DLP Period

14	OEM Partner Certification Page no. 31	OEM Partner Certification MAF is asked then why OEM	MAF is asked then why OEM partner certificate required		OEM partner certificate is for suppliers/resellers as a proof of their registration/partner ship with OEM. MAF is bid specific requirement for supply of items by OEMS, to be submitted by suppliers/resellers.
15	Passive Items	Tender document	Passive items are not mentioned in the tender. So we assuming all the passive work have been done by QCI.		It is Part of GC Package
16	Clause No 2, 2. Payment Milestones:, Page no 17	1. On successful Supply , Installation, Testing an d Commissioning at site .--- 75% 2. On successful User Acceptance including Go- Live upto the satisfaction of Client---- 20% 3. Completion of Defects Liability Period of 12 months---- 5%	Reques you to kindly amend the payment criteria for wider participation as below 1. On successful Supply of materials on prorata basis --- 75% 2. On successful Installation, Testing and Commissioning at site User Acceptance including Go- Live upto the satisfaction of Client---- 20% 3. Completion of Defects Liability Period of 12 months--- 5%	Its capex intensive project and all the reputed OEM asked 100% payment on or before supply of material. Payment on supply is important to manage the cash flow and keep the project costing as per approved estimate.	Kindly refer Corrigendum-1
17	Clause No 15 Page No 77 **EPBAX by IPBAX System**		Some Features / Terminology used are OEM specific	Supply Installation Testing and Commissioning of IP EPABX system Equipped with 08 PRI 16 Trunks 16 Digital 40 IP users and 400 analog ext Expandable upto 3500 port Hardware Platfrom for Unified Communication Server should have Dual server/Processor & Dual Power supply for Complete Hot Standby/Redundant Solution so that during Either component Failure Should not disconnect on going calls with any user type of user i.e.Analog ,	Please refer revised BOQ.

				Digital, IP with universal slots for all Cards Voicemail Required for all Users in BOQ and all Licenses as required to make whole BOQ operational.	
18		Universal Slots 27 Max VOCODER CHNLS 248 Max IP Trunks 99 license free Max VMS CHNLS 64	Single OEM Specific Terms	Universal slots for all Cards Voicemail Required for all Users in BOQ and all Licenses as required to make whole BOQ operational.	Please refer revised BOQ.
19		Two slots for CPU and two slots for Power supply for Redundancy.	No Clarity for Redundancy	Dual server/Processor & Dual Power supply for Complete Hot Standby /Redundant Solution so that during Either component Failure Should not disconnect on going calls.	Please refer revised BOQ.

20		Supply Installation Testing and Commissioning of IP EPABX system Equipped with 08 PRI 16 Trunks 16 Digital 40 IP users and 400 analog ext Expandable upto 1296 port Hardware Platfrom for Unified Communication Server Supports Two Slots for CPU and Two Slots for Power Supply for Redundancy Max Universal Slots 27 Max VOCODER CHNLS 248 Max IP Trunks 99 license free Max VMS CHNLS 64 Max IP Users 2000 Note VOCODER and VOICEMAIL modules are not included For redundancy additional VOCODER and VOICEMAIL modules must be procured	1. Does QCIN have 8 PRI Trunks? Does QCI need 8 PRI Trunks + 16 CO Trunks for a density of 456 Extensions? 2. The description is asking for Unified Communication Server but then asking for 2 Slots for CPU and 2 Slots for Power Supply. 3. Does QCIN need an EPABX System with Cards or EPABX with Unified Server? 4. Does QCI need only Slots for CPU and PSU Redundancy? or CPU and PSU Redundancy is required as default.? 5. What is VOCODER CHNLS 248 ? Kindly clarify? 6. This is Proprietary item of OEM M/s Matrix . Total available trunks with QCIN is 256 (8 PRI +16 CO trunks) while SIP Trunks asked are only 99 SIP Trunks? Only Matrix EPABX Systems have limitations of maximum 99 SIP Trunks 7. BSNL shall be migrating from PRI to SIP Trunks from April 2025 and if QCIN has 8 PRI Trunks then how come they are asking only for 99 SIP Trunks. They shall need 240 SIP Trunks 8. The tender is asking for 64 Channels VMS. Does QCIN need 64 Simultaneous Channels for VMS? 9. For How many extensions VMS should be provided? 10. For how much storage VMS shall be provided?	1. The Tender is asking for a specific OEM make EPABX System with Model and Item names 2.This is against the CVC and GFR 2017 rules and also against the notification issued by PMO and MOC as these are restrictive conditions 3. These specifications are of OEM M/s Matrix EPABX System Model LENX 4. Since Matrix EPABX Systems support only 99 SIP Trunks while the requirement shall go to 256 for QCIN. What shall QCIN in such circumstances do? 5. No clarity on whether Card based PBX required or Server based? 6. No clarity of Voice Mail Boxes and Voice Mail Storage for each Subscriber is available 7. No specifications are provided for EPABX 8. Digital Phones are old Outdated Technology but still asked 9. Asked for 16 Digital Extensions but no of Digital Phones are only 3 while in case of IP Phones 40 Extension Licenses are asked and 40 IP Phones are considered then why only 3 Digital Phones? Why not convert all Digital Phones to IP which is a latest Technology 10. It is also requested that Server based IP EPABX be deployed which is latest in Technology platform and shall last for coming next 10 years 11. Matrix too has a product called ANANT based on Server- Media Gateway Architecture 12. We can share last 10	Please refer revised BOQ.

				GEM bids which are smaller in capacity/configuration as compared to QCI's requirement but still opted for Server- Media Gateway based Architecture as it allows future expansion and upgradation very easily without any change of existing hardware. Also these servers are Industry Grade COTS (Commercially Off the Shelf Servers) from HP/DELL etc and hence the reliability is very high. 13. In a CPU based EPABX every software upgradation shall require some change in hardware. Also the CPU based Cards have limited memory to accommodate future enhancements as compared to Servers 14. Also it is requested to provide complete Technical Specifications of EPABX System and the same to be generic thereby allowing fair participation 15. It is also mandatory to ask for TEC (Telecommunication Engineering Certificate) based on GR (Generic requirement) which should clearly mention that the offered IP EPABX supports IPV 4 and IPV 6 from day one 16. The CPU card-based Systems do not generally support IPV 4 and IPV 6 as its an old Technology 17. It is also suggested that Server Redundancy be asked which means if One Server fails the calls switch over to Redundant Server without disconnection of on going calls. This is the most important and critical aspect of IP EPABX	

				18. By putting OEM Specific brands and models the tender becomes restrictive and is not permissible under GFR2017 and CVC rules. Also Ministry of Commerce and PMO has released notification to a;; Govt Bodies to refrain from floating Bids with restrictive conditions(Enclosed)	

21	Clause No 16 Page No 77 **EPBAX by IPBAX System Matrix Digital phone EON 510**	Matrix Digital phone EON 510 Programmable Keys 20 4 Context Sensitive Keys 16 DSS Keys Display 240x64 Pixels Graphical LCD with Backlit Color Black Compatible PBX All Variants of SARVAM and ETERNITY Series Polyphonic Ringtone Full Duplex Speaker Phone Hold Conference Redial Transfer Message Wait Lamp Ringer Lamp	1. This is OEM Specific Model 2. All Digital Phones of different OEMs have different designs and are proprietary in nature 3. QCIN has asked for specific OEM Digital Phone and this is against the Procurement Policy of GOI 4. The Tender is asking for 16 Digital Extension cards but asking for only 3 nos of Digital Phones which means the cost being spent towards balance 13 Digital Ports shall be wasted 5. The same is not the case with either IP Phones and/or Analog Phones. This means the Tender is asking for 40 IP Extensions and corresponding 40 IP Phones are being bought which is perfect 6. Similarly 400 Analog Extension hardware is being asked and corresponding 400 analog phones are being bought 7. But only in case of Digital Phones the cards are for 16 ports but only 3 Digital Phones are being asked. This translates to the fact that OEM specific product is being considered	1. Digital Phones are outdated Technology globally and these phones are Proprietary in design 2.In next few years the availability of chipsets/semiconductors for these Digital Phones shall not be available and this could lead to problems in terms of Supplies and Servicing 3. The latest Technology being IP Phones 4. QCI is anyways buying 40 IP Phones then why buy 3 Digital Phones? This shall create confusion within the organisation as to who shall be allotted Digital Phones and who shall be allotted IP Phones 5. Considering that only 3 nos of Digital Phones are being bought means that the same are being allotted to Senior Officers as these are with Color Display, DSS etc. This also means that Senior Officers are being provided with a product which is technologically not the latest and other 40 Officers are being provided with Latest Technology IP Phones 6. Hence its suggested that the Digital Phones be removed and these 3 subscribers also be provided with IP Phones for the purpose of uniformity and parity	Please refer revised BOQ.
22		Matrix Digital phone EON 510	OEM Specific	Digital Phone with Programmable Keys 20 ,4 Context Sensitive Keys 16 DSS Keys Display 240x120 Pixels Graphical LCD with Backlit Color Full Duplex Speaker Phone Hold Redial	Please refer revised BOQ.

				Transfer Message Wait Lamp Ringer Lamp	
23		Compitable to All Variants of SARVA M and ETERNITY Series	One OEM Specific	Kindly Consider to Relax OEM specific Words, only Technical Specifications should be allowed.	Please refer revised BOQ.
24	Clause No 17 Page No 77 **EPBAX by IPBAX System IP phone Ethernet Ports**	IP phone Ethernet Ports 2 Gigabit ports PC and LAN SIP 1 SIP Account in Extended 2 SIP Account in Standard Display 240 x 64 Pixels Graphical LCD with Backlit Color Black Programmable Keys 4 Context Sensitive Keys 16 DSS Keys Power Supply PoE	1. This is Matrix Proprietary ip phone Specifications. 2. It is requested that the IP Phone be asked which is IP Open standards so that QCIN in future can buy SIP based IP Phones either from OEM or from open market 3. It is requested to incorporate IPV 4 and IPV 6 in IP Phones	1. It is requested that the IP Phones being bought should support Open SIP which is the open source 2. This means that QCI shall have an option of buying SIP IP Phones based on open SIP protocol from any OEM/Open market 3. With not mentioning open SIP the proprietary IP Phone shall work only with respective IP PBX and tomorrow the OEM may ask for hefty sum for new phones and repair of old IP Phones 4. All govt Tenders /GeM Bids ask for Open SIP	Please refer revised BOQ.
25			IP phone Ethernet Ports 2 Gigabit ports PC and LAN SIP 1 SIP Account in Extended 2 SIP Account in standard Display 240x64 Keys 16 DSS Keys Power Supply PoE pixels	IP phone Ethernet Ports 2 Gigabit ports PC and LAN SIP 1 SIP Account Standard Display 240 x 120 Pixels Graphical LCD with Backlit Color Black Programmable Keys 4 Context Sensitive Keys 16 DSS Keys Power Supply PoE	Please refer revised BOQ.
26	Clause No 18 Page No 77 **EPBAX by IPBAX System Analogue Feature Phone**	Analogue Feature Phone Supply Installation Testing and Commissioning of Analogue Phone with CLI Caller ID	It is requested to provide some basic Specifications for Analog Phones such as o Type of LCD Display o No of Lines in Display o No of 1 touch keys o Speakerphone o Support of name and number on LCD o Etc etc		Please refer revised BOQ.

27	Clause No 7, 8 & 9 Page No 78 **Annexure C : LIST OF APPROVED MAKES (PACKAGE - ACTIVE DATA SYSTEM)**	ANNEXURE – C **LIST OF APPROVED MAKES** **PACKAGE - ACTIVE DATA SYSTEM** **S. No. / ITEM DESCRIPTION / PROPOSED MAKE** A. Active Components 1) L2/L3 Switches / POE Switches — Cisco / HP / Ruckus 2) Fire Wall — Palo Alto / Fortinet / Sophos 3) Access Points (WiFi) — Cisco / HP / Ruckus 4) AAA Solution — Cisco / HP / Ruckus 5) Server — Dell / HP / Lenovo 6) SFP Modules — Cisco / HP / Ruckus 7) EPABX / IPBAX System — Matrix / Alcatel / Unify 8) IP Phone — Matrix / Alcatel / Unify 9) Analogue Phones — Matrix / Alcatel / Beetel Notes: a. For any other item which is not covered in list of makes, the respective executing agency shall notify well in advance prior to execution. Executing agency shall propose renowned makes with its technical datasheet or sample for review and approval from client/PMC/Architect/Consultant b. The list of approved makes or materials serves as base guideline for the project. However the client reserves the right to choose any of the mentioned makes or any other preferred equivalent makes.	Please refer item no 7, 8 and 9 1. The approved Brands show only one Make in India OEM which is Matrix 2. The other two OEMs viz Unify is manufactured in Germany and Alcatel is manufactured in France 3. If QCI logs into GEM portal and into EPABX Category it shall not find Unify and Alcatel under Make in India Local Suppliers while your Bid is asking only Class-I Local Suppliers to Bid 4. Both these OEMs Unify and Alctel are not Class-I Suppliers and hence QCI must include other names like Asttecs Communications who is MII Local Supplier for IP PBX		Kindly refer Corrigendum-1

Reference No. QCI/IT/0125/404

Request for Proposal
for
Supply, Installation, Testing and Commissioning of IT systems at QCI Office, WTC, Nauroji Nagar, New Delhi

Quality Council of India (QCI),
2nd Floor, Institution of Engineers Building
2, Bahadur Shah Zafar Marg, New Delhi – 110002
T: +91-11-23378056 / 57; F: +91-11-23378678
W: www.qcin.org E: info@qcin.org

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Tender Notice

1. Quality Council of India invites proposals for "**Supply, Installation, Testing and Commissioning of IT systems at QCI Office, WTC, Nauroji Nagar, New Delhi"**
2. The content of this RFP enlists the requirements of Quality Council of India. It includes the Bidding Terms & Conditions which details out all that may be needed by the potential bidders to understand the financial terms and bidding process and explain the contractual terms & Conditions that the Quality Council of India wishes to specify at this stage.
3. The prospective Bidders are invited to submit a "Technical Bid" and "Financial Bid" for the package. Methodology for submission of Bid has been detailed hereunder in this document. The Bidder is expected to examine all instructions, forms, terms, conditions, specifications and other information in the bidding documents. Failure to furnish all information required as per the bidding documents or submission of a bid not substantially responsive to the bidding documents in every respect will be at the Bidder's risk and may result in rejection of its bid. The Bidder shall bear all costs associated with the preparation and submission of its Bid, and the QCI shall in no case be responsible or liable for those costs, regardless of the conduct or outcome of the Bidding process. After the submission of the proposal according to the instructions provided in the sections below, the bids will be evaluated through a two-bid system.
4. The Documents to be submitted online in GeM Portal:
    A. The "Technical Bid" shall contain the following:
        i. Signed and stamped Form-1, 2, 3, 4, 5, and 6 attached under Annexure-A
        ii. EMD details (Bid security as per RFP)
        iii. Original Power of Attorney for the Authorised Representative
        iv. Work Orders/Letter of award/Experience Certificate issued by Client in support for experience of similar works detailed in Clause III: Eligibility Criteria.
        v. Copies of ISO related certificate.
        vi. Bid Specific Manufacturer' s Authorization Form (MAF) from OEMs as per Form 6 of Annexure A.
        vii. Item compliance sheet to be signed by authorised signatory ***– no price/rate shall be mentioned in the item compliance sheet/.*** **Non-compliance to this will be liable for rejection.**
        viii. Any other details that the bidder may like to provide.
    B. The "Financial Bid" shall contain the following:
        i. The bidder should submit the proposal as per the forms in Annexure B through online mode only in relevant sections in GeM Portal (https://gem.gov.in)
        ii. Taxes should be included in the above proposal.
5. The bidder shall submit the proposals online through GeM Portal (https://gem.gov.in) as per the date and time mentioned on the GeM portal. It is the responsibility of the bidder to submit the bid before the last date and time on the GeM portal, and QCI shall not be responsible for any delay due to any of the technical/server issues.

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6. The bidder shall submit the Proposal in the form and manner specified in this RFP. Bid received in the manual form at the QCI Office address will not be accepted.

Note –

1. The Technical bid should not include any information related to the Financial Bid. If any information related to the Financial Bid is contained in the Technical Part of the Bid, it shall be declared non-responsive.
2. The bidder shall furnish a detailed price break-up of the financial bid, mentioning unit prices, total price, applicable taxes and duties, any commission/ hidden charges, discount
3. Joint Ventures/Consortium participation are not allowed in this bid.

Tender Summary

S. No.	Item	Details
1	Project Scope	Supply, Installation, Testing and Commissioning of IT systems at QCI Office, WTC, Nauroji Nagar, New Delhi
2	Pre-Bid meeting	As per GeM portal
3	Delivery Period (including installation and commissioning)	75 calendar days
4	Defects Liability Period	12 calendar Months
5	Warranty Period	Five (05) years OEM Warranty
6	Type of Bid	Two Packet Bid
7	Earnest Money Deposit	₹ 15 lakhs
8	Last Date for Submission of Bid	As per GeM portal
9	Performance Security	5% of the contract value
10	Pre-bid Queries	To be submitted to procurement@qcin.org *as per format given in Annexure-A* within 1 day from the date of conducting of pre-bid meeting.
11	Bid validity	120 days from the date of closing of bid

I. INTRODUCTION

Quality Council of India (QCI)

The Quality Council of India (QCI) is a pioneering experiment of the Government of India in setting up organizations in partnership with the Indian industry. The mandate of QCI is to lead nationwide quality movement in India by involving all stakeholders for emphasis on adherence to quality standards in all spheres of activities primarily for promoting and protecting interests of the nation and its citizens. To achieve this, QCI is playing a pivotal role in propagating, adoption and adherence to quality standards in all important spheres of activities including education, healthcare, environment protection, governance, social sectors, infrastructure sector and such other areas of organized activities that have significant bearing in improving the quality of life and well-being of the citizens of India.

To achieve this, QCI is playing a pivotal role in propagating, adoption and adherence to quality standards in all important spheres of activities including education, healthcare, environment protection, governance, social sectors, infrastructure sector and such other areas of organized activities that have significant bearing in improving the quality of life and well-being of the citizens of India.

It functions through its five constituent Boards and Project Implementation Divisions to establish National Accreditation Programme and Third-Party Assessment models with an aim to improve the quality ecosystem of the nation.

II. SCOPE OF WORK AND DELIVERABLES

The scope of work covered in this tender shall be as per the BOQ, specifications, drawings, instructions, orders issued to the vendor from time to time during the execution of work. The total area where the work needs to be undertaken is 67,868 ft. approx.

Floor	Carpet Area
QCI Office	**(sq. ft.)**
Tower K – 1st floor	Approx. 17,991
Tower K - 2nd floor	Approx. 17,991
Tower J - 2nd floor	Approx. 21,592
Tower J - 3rd floor	Approx. 10,294

1. **The Contract Period**: The Contract period shall be reckoned from the day of issuance of the GeM Contract and shall be **75 days** from the date of award of contract. The completion date shall be the date of completion of the works as per the milestones defined in the RFP including any extensions granted and taking care of snag list.
2. **Defects Liability Period**: The Defect Liability Period shall be **12 calendar months** starting from the date of issuance of the Completion Certificate. The selected agency shall promptly rectify/repair/replace all defects and deficiencies observed by the QCI Authorised Person during the Defects Liability Period within a period of 7 (seven) business days from the date of notice issued by QCI Authorised Person. The costs to rectify/repair/replace of all defects shall be borne solely by the selected agency. If the selected agency fails to rectify/repair/replace the defect(s) deficiency(ies), within the specified time as above, the work should be redone or rectified through another agency, or departmentally by employing skilled labourers, at the selected agency's cost. However, the penalty shall be imposed not to adhere the specified time for rectification/repair/replacement of the defect @ 1.5 times of the total cost incurred for the rectification/repair/replacement of the work/defect and the same shall be deducted from the final bill.
3. **In case the bidder is an OEM authorized reseller/local supplier, they shall procure the items mentioned in the BOQ from the OEMs as mentioned in the list of approved makes and technical specifications**. The reseller/OEM shall strictly adhere to the specifications and any deviation in this regard will not be acceptable.

4. Upon receipt of drawings after award of work, Vendor shall prepare shop drawings wherever necessary and get it approved by the Authorised QCI representative prior to execution of work.

III. PRE-QUALIFICATION CRITERIA

S. No.	Basic Requirements	Specific Requirements	Documents Required
1	Legal Entity	The Bidder(s) interested in participating in the Selection Process must be a duly registered legal entity in India, under any one of the following categories: - • A Limited Liability Partnership ("LLP") registered under the LLP Act,2008; • an Indian Company ("Company") registered under the Companies Act, 1956/ 2013; • a "Partnership Firm" registered under the Indian Partnership Act, 1932; • a Sole Proprietorship firm, registered as such under the Applicable Laws of India With minimum 7 years of existence at the time of submission of the bid.	Registration documents of the Bidder as a company/firm or any legal entity along with: i. Incorporation Certificate of the company ii. PAN Card of the registered legal entity iii. GST certificate of the registered legal entity iv. Certified copy of registered Partnership Deed; copy of Statement filed in the Register of Firms disclosing names, addresses and relevant details of ALL partners of the Partnership Firm v. MSME Certificate (if applicable) vi. Any other supporting document, as may be required
2	OEM/Authorized Reseller of OEM	Bidder must be principle OEM or Authorized vendor/ reseller of OEM	i. Letter of confirmation from OEM, ii. Valid OEM partner/registration letter for bidder, AND Bid Specific Manufacturer Authorization Form (MAF) from the OEM listed in the list of approved makes *(as per Form 6 of Annexure A)*
3	ISO Certification	The bidder or the OEM should be ISO 9001, ISO 14001, ISO 27001 or higher certified.	Copies of relevant and valid ISO Certificates to be submitted along with the bid.

4	Average Annual Turnover	The bidding entity must have minimum average annual turnover of ₹ 30 crores or more in the last three financial years (i.e., 2021-22, 2022-23 and 2023-24). ***The Turnover values displayed above shall prevail and supersede the turnover value displayed in the GeM Bid.***	i. Audited Financial Statements of FYs 2021-22, 2022-23 and 2023-24; or ii. Turnover certificate by CA (original) with FRN Number and UDIN Number for FYs 2021-22, 2022-23 and 2023-24
5	Technical Capability & Experience	The Bidder must have successfully completed service of similar scope in projects with any Central / State Govt Organization / PSU / Statutory / Autonomous Organisation / Public Listed Company/ Private organisations of repute in the last preceding **five** financial years (i.e. 2019-20, 2020-21, 2021-22, 2022-23 and 2023-24) for work order value of: • at least 03 (three) completed projects/ contracts with each project/ contract having a minimum contract value of ₹ 2.7 Cr or more, OR • at least 02 (two) completed projects/ contracts with each project/ contract having a minimum contract value of ₹ 3.4 Cr or more, OR • at least 01 (one) completed projects/ contracts with each project/ contract having a minimum contract value of ₹ 5.5 Cr or more The definition of "Similar Services" for the above stated work is as below: ***Similar services mean Contracts having "Supply, installation, testing and commissioning of Information Technology (IT) systems like –Local Area Networking (LAN)/IT Hardware and Software Supply/CCTV Installation/Access Control Installation etc".***	Work Order / Work Completion Certificates issued by Client.
6	Non-Blacklisting declaration	The bidder shall not have been blacklisted by any central or state government agency, PSU etc. in the last 5 years preceding the proposal due date.	As per format in *Form 4 of Annexure-A* signed and stamped on company letterhead
7	Service Support	Bidder/OEM should have a 24X7 service support to address any issues faced by Client	Details of Contact persons along with Escalation Matrix should be provided along with the bid.

IV. METHOD OF EVALUATION

- QCI has adopted a two-packet bid system for award for work to the successful bidder.
- In evaluation first eligibility of the bidders will be examined as technical bid evaluation.
- Only technically qualified bidders will be considered for further evaluation process.
- During the financial bid evaluation, bidder who have quoted lowest rate in totality will be the successful bidder and declared as L1 bidder as per GeM portal *(https://gem.gov.in/)*.

V. TERMS AND CONDITIONS

1. The contract shall be valid for a period of 14.5 calendar months (2.5 months of delivery period and 12 months of Defects Liability Period). The contract period may be extended, subject to satisfactory performance of the vendor on the same terms & conditions and the requirements of QCI.

2. The QCI reserves the right to reject any or all the bids received without assigning any reason thereof. The acceptance of a tender shall be effective w.e.f. the date on which the letter of intent of acceptance of the tender is put in the communication by the QCI.

3. **Mobilization of Men, Materials and Machinery**: All expenses towards mobilization at site and de-mobilization including bringing in equipment, work force, materials, dismantling the equipment, clearing the site etc. shall be deemed to be included in price quoted and no separate payment on account of such expenses shall be entertained.

4. The rates quoted by the tenderer shall be firm and fixed for the entire period of completion and till handing over of the work. No revision to rates or any escalation shall be allowed on account of any increase in price of materials, labour, POL and overheads etc or any other statutory increase during the entire contract period.

5. **Technical Staff for Work**: The vendor shall employ at his own cost the adequate number of technical and other staff during the execution of this work depending upon the requirement of work.

6. For completing the work in time, the vendor might be required to work in two or more shifts (including night shifts). No claim whatsoever shall be entertained on this account, not with-standing the fact that the vendor may have to pay extra amounts for any reason, to the labourers and other staff engaged directly or indirectly on the work according to the provisions of the labour and other statutory bodies regulations and the agreement entered upon by the vendor with them.

7. **Work to be executed in accordance with Specifications, Drawings, Orders etc.:** The vendor shall execute the whole and every part of the work in the most substantial and workman like manner both as regard materials and otherwise in every respect in strict accordance with the specification. The vendor shall also conform exactly, fully and faithfully to the design, drawings and instructions issued in respect to the work assigned by the QCI Authorised Person.

8. **Site-Visit**: The bidder may visit the site with prior approval of QCI to have a better understanding of the scope of work. The request to be submitted at procurement@qcin.org at least one day before the proposed site visit date along with the Authorization letter of the person visiting the site. The bidders will be allowed to visit the site from date of issue of this tender until day before the last date of submission.

   Address: 2nd & 3rd Floor of Tower J and 1st & 2nd Floor of Tower K, World Trade Centre, Nauroji Nagar, New Delhi -110029

9. **Schedule of Rates:** The quantities shown against the various items of work are only approximate quantities which may vary as per the actual requirement / measurement at site.

10. **Materials and Samples**: The materials / products used on the work shall be of approved make/brands out of list of approved makes given in the tender document. In exceptional circumstances, or in case if any items whose make is not listed, QCI Authorised Person may allow alternate equivalent makes / brands of products / materials, the replaced/alternate materials used shall have same or richer specifications to the original materials and compatible to the work at his sole discretion. However, the vendor has to submit the request to QCI at least 7 days in advance for the same. The final choice of brand/ make shall remain with the QCI Authorised Person, whose decision in the matter shall be final and binding and nothing extra on this account shall be payable to the vendor.

11. **Warranty**:
    i. The vendor must provide OEM Warranty certificates in the name of QCI for all the items as mentioned in the BOQ. In case of any specialized items become obsolete in the market, OEM support for such items (spare parts/ technical support) is to be provided for a **minimum of 5 years** after completion of Warranty period. Warranties shall be in the form of Certificates issued by the Manufacturer/OEM in the name of QCI clearly specifying the period of warranty, quantity & description of items. The items/equipment procured under this package shall not be before the date of work order.

    ii. The agency has to produce Manufacturer Test Certificates (MTC), Warranty Certificates/Invoices for material/equipment supplied for certification and approval. The warranty of all the items should be transferred to QCI as a part of the handover of the site.

12. **Care of Works:** From the commencement to the completion of the works handing over to the QCI , the vendor shall take full responsibility for the care thereof and all temporary works and in case any damage, loss or injury shall happen to the works or to any part thereof or to any temporary works due to lack of precaution / negligence on part of vendor, the same shall be made good at his own cost.
    i. Care shall be taken by the vendor during execution of the work to avoid damage to the building and adjacent buildings.
    ii. They shall also be responsible for repairing all such damages and restoring the same to the original finish at their cost.
    iii. They shall also remove all unwanted and waste materials arising out of the execution of work from the site from time to time.

13. **Compensation for Delay and Remedies**: If the vendor fails to maintain the required progress in terms of relevant clause of contract, to complete the work and clear the site on or before the Completion date or extended date of completion, he shall, without prejudice to any other right or remedy available under the law to the Govt. on account of such breach, pay as agreed compensation the amount calculated at the rate stipulated below or such amount as the QCI Authorised Person (whose decision in writing shall be final and binding) may decide on the amount of tendered value of the work for every complete day /week (as applicable) that the progress work remains incomplete.

14. **Defects Liability Period:** The vendor shall be responsible for the rectification of defects in the works for a period **of 12 calendar months** from the date of taking over of the works by the Owner / Client. Any defects discovered and brought to the notice of the vendor shall be attended to and rectified, by the vendor at his own cost and expense.

The scope of the defect liability will be as under (as applicable):

S. No	SLA Parameters	Description	Response Time
1	Duration	Defect Liability Period duration	12 months from successful commissioning and handover
2	Remote Support	Off-site assistance for issue resolution	24/7 for critical and high priority issues on immediate basis
3	On-site Support	Physical presence for issue resolution	Within 24 hours when required
4	Critical Issues	Severe problems affecting core business operations	Within 2 hours (onsite) Immediate (Remote)
5	High Priority Issues	Significant issues impacting multiple users or departments	Within 4 hours (onsite) 1hour (Remote)
6	Medium Priority Issues	Issues affecting a limited number of users or non-critical functions	Within 8 business hours (onsite) 02 hours (Remote)
7	Low Priority Issues	Minor issues with minimal impact on operations	Within 24 business hours
8	System Uptime	Guaranteed system availability	99.9% excluding scheduled maintenance
9	Preventive Maintenance	Regular system checks and updates	Quarterly
10	Spare Parts Availability	Provision of critical replacement components	Within 24 hours
11	Software Updates	Application of critical security patches	Within 48 hours of release
12	Documentation	Recording of all changes, fixes, and updates	Monthly reports
13	Training	Refresher sessions for IT staff	Quarterly
14	Escalation Matrix	Defined process for issue escalation	Immediate access to contact details
15	Penalty Clause	Financial consequences for SLA breaches	As per agreed terms
16	Review Meetings	Assessment of SLA performance and system health	Monthly
17	End of Period Inspection	Final comprehensive system check	One month before end of defect liability period

Note: The above list is illustrative for works, however the same is not exhaustive and the decision of QCI Authorized Person would be final and binding in this regard.

15. **Precautions to avoid any nuisance to the neighbourhood / surrounding**: All the necessary precautions will need to be taken during the implementation of the project (either during day or night), to avoid any nuisance or any harm causing to the neighbourhood/surrounding areas of proposed construction site. No complaint should arise by the neighbourhood /occupiers of other office in the building, during the development work by vendor or any of the persons directly or indirectly related to the site work. In case of any such conditions the vendor shall be fully responsible for the consequences & settlement.

16. **Vendor Liable for Damage Done and For Imperfections:** If the Vendor or his work people or servants shall break, deface, injure or destroy any part of a building in which they may be working or any building, road, fence, enclosure, or cultivated ground, contiguous to the premises on which the work or any part of it is being executed, or if any damage shall happen to the work. If any imperfection becomes apparent while the work is in progress, , or the vendor shall within a period specified by QCI after a Certificate, final or otherwise of its completion (given by the QCI Authorised Person/PMC), shall cause the same to be made good by other workmen and deduct the expense (of which the certificate of the QCI Authorised Person /PMC shall be final) from any sums may be then, or at any time, thereafter that may become due to the Vendor, or form his performance security, or the proceeds of sale thereof, or of a sufficient portion thereof.

17. **Withdrawal of Work from the Vendor**: If QCI, at any time and for any reasons, whatever, including inability to maintain pro rata progress, think any portion of the work should not be executed or should be withdrawn from the vendor, he may by notice in writing within 7 days to that effect, require the Vendor not to execute the portion of the work specified in the notice, or may withdraw from the Vendor the portion of work, so specified, and the Vendor shall not be entitled to any compensation, by reason of such portion of work having been withdrawn from him. QCI may supplement the work by engaging another agency to execute such portion of the work at the risk and cost of the original vendor without prejudice to his rights. He shall also be competent to levy penalty for delay in progress. The recovery of excess cost shall be made good from the bills or any other claims and shall not be deferred.

18. **Safety of Workers**: Ensuring safety of workers at time of execution of work shall be the responsibility of the selected bidder. QCI has no obligation or responsibility towards any individual in any such case or situations. The selected bidder must have and maintain valid and keep in force insurance policies accidents, public liability, professional indemnity, worker's compensation required by law. The selected bidder shall provide personal protective equipment like helmet, face shield, gloves, safety shoes, etc., of standard make acceptable, to all the employees at their cost.

19. **Force Majeure:** Any delay in or failure of the performance of either party hereto shall not constitute default hereunder to give rise to any claims for damages, if any to the Extent such delay or failure of performance is caused by occurrences such as acts of God or the public enemy, expropriation, compliance with any order or request of Government authorities, acts of war, rebellions, sabotage fire, floods, illegal strikes, pandemic, epidemic or riots (otherwise than among the vendors employees). Only extension of time shall be considered for Force Majeure conditions as accepted by QCI. No adjustment in contract price shall be allowed for reasons of force majeure.

    Force Majeure shall not include:

    i. any event which is caused by the negligence or intentional action of a Party or by or of such Party's agents or employees, nor

ii. any event which a diligent Party could reasonably have been expected both to take into account at the time of the signing of the Contract and avoid or overcome with utmost persistent effort in the carrying out of its obligations hereunder.

iii. Insufficiency of funds or manpower or inability to make any payment required for execution of services under this Contract.

20. **Technical Data sheet**: Before initiation of inspection of material, the vendor should submit a Technical Data sheet for approval of QCI Authorised person.

21. **Earnest Money Deposit (EMD)/ Bid Security**: Bidders shall submit, along with their Bids, Bid Security (EMD) of **INR 15 lakhs** as per the details mentioned below:

i. By demand draft in favour of Quality Council of India, payable at New Delhi, or

ii. Deposit through RTGS/ NEFT as detail under**: -

**For payment of EMD through Bank transfer:

Name of the Bank	ICICI Bank, Gurgaon Millennium Plaza Branch
Name of the Account (Account Holder Name)	QUALITY COUNCIL OF INDIA
Saving Bank Account (Account Number)	739301000237
IFSC Code	ICIC0007393

Note:

i. NO CHEQUES WILL BE ACCEPTED. The applicant whose Tender Fee and EMD has been deposited by NEFT/RTGS, must enclose the transaction details/ evidence along with their technical bid, otherwise the bid will be rejected.

ii. Bid security in any other form will not be entertained.

iii. No interest will be payable to the Bidder on the amount of the EMD. Unsuccessful Bidder's EMD will be discharged/ returned as promptly as possible, but not later than 30 days of completion of the process

iv. In case bid is submitted without the bid security then QCI reserves the right to reject the bid without providing opportunity for any further correspondence to the bidder concerned. The EMD may be forfeited:

- If a bidder withdraws its bid during the period of bid validity.
- Bidder does not respond to requests for clarification of its Proposal.
- Bidder fails to provide required information during the evaluation process or is found to be nonresponsive.
- In case of a successful bidder, if the bidder fails to sign the contract in accordance with this RFP.

22. **Exemption of EMD for MSEs/ Startups applicant:** "Micro and Small Enterprises (MSEs) as defined in MSE Procurement Policy issued by Department of Micro, Small and Medium Enterprises (MSME) and Startups as recognized by Department for Promotion of Industry and Internal Trade (DPIIT)" are exempted from submission of EMD (Bid security) in this tender. Bidders claiming exemption of EMD under this rule (170 of GFR) are however required to submit a signed Bid securing declaration accepting that if they withdraw or modify their Bids during the period of validity, or if they are awarded the contract and they fail to sign the contract, or to submit a performance security before the deadline defined in the request for bids document, they will be suspended for the period of 24 months from being eligible to submit Bids for tenders with QCI. Scan copy of the signed documents related to exemption of EMD along with Bid Security Declaration shall be submitted at the time of submission of bid.

Note: MSEs with trading as major activity will not be allowed exemption for payment of EMD.

23. **EMD Refund:**
    - **For Unsuccessful Bidders:** The EMD of all unsuccessful bidders would be refunded without interest by QCI on finalization of the bid in all respects by the successful bidders within 45 days after finalization of tender.
    - **For Successful Bidders:** The EMD of successful bidders would be returned within 30 days, without any interest upon submission of Performance Bank Guarantee by the successful bidders within the stipulated timeline.
    - Bid submitted without EMD (expect for exempted categories) shall be treated as non-responsive and will be liable for rejection.

24. **Performance Security**: The selected Bidder shall submit irrevocable Performance security, within 15 days from the Notification of award, for a value equivalent to **5% of the contract value**. The Performance security submitted in the form of Bank Guarantee shall contain a claim period of three months from the last date of validity. The bank guarantee shall be valid for the period of 15 months from the date of issuance of work order plus three (03) months of claim period. The selected Bidder shall be responsible for extending the validity date and claim period of the Performance Bank Guarantee as and when it is due on account of non-completion of the delivery and Warranty period.
    The physical copy of Performance Guarantee should be submitted at QCI-HO within 15 days from the notification of award. In case the selected bidder fails to submit a Performance Guarantee within the time stipulated, QCI at its discretion may cancel the order placed on the selected bidder without giving any notice. QCI shall invoke the performance guarantee in case the selected bidder fails to discharge their contractual obligations during the period or QCI incurs any loss due to bidder's negligence in carrying out the project implementation as per the agreed terms & conditions.

25. **Amendments to RFP:** At any time prior to the last date for receipt of applications, QCI may for any reason, whether at its own initiative or in response to a clarification requested by a prospective applicant, modify the RFP document by an amendment by issuing Corrigendum/ Addendum. The same shall be published in QCI website. In order to provide prospective applicants reasonable time to take the proposed amendments into account while preparing their proposals, QCI may at its discretion extend the last date for the receipt of proposals and/or make other changes in the requirements set out in the RFP. Any such amendment shall be communicated to the vendors.

26. **Amendment to work**: Any amendments to the scope of work under this RFP must be proposed in writing by either party, and shall be subject to mutual agreement, documented through a formal written amendment or change order signed by authorized representative of QCI. Amendments may result in adjustments to the project schedule, costs, and responsibilities, which shall be explicitly defined in the amendment document.

27. **Insurance**: The vendor shall obtain and maintain a comprehensive insurance policy at their own cost, covering all risks associated with the execution of the work, including but not limited to loss or damage to equipment, materials, and the worksite, as well as third-party liabilities, injuries to personnel, and damage to property arising from the performance of the contract. The insurance policy shall remain valid throughout the duration of the contract and shall be obtained from a reputable and authorized insurance provider. The vendor shall provide proof of such insurance to the client prior to commencing work and ensure that the policy includes the client as a

beneficiary or co-insured, as applicable. Any lapse, cancellation, or modification of the policy without prior written consent of the client shall be deemed a breach of the contract.
Goods supplied under the Contract shall be fully insured against loss by theft, destruction or damage incidental to manufacture or acquisition, transportation, storage, fire, flood, under exposure to weather and delivery at the designated project locations, in accordance with the applicable terms. The insurance charges will be borne by the vendor and QCI will not be required to pay such charges if incurred. The goods will be delivered and stored at the destination in perfect condition.

28. **Equipment & Job facility Area:** The vendor will have to make his own arrangement for storage of materials, equipment's, machineries to be used in the execution of this work well in time after award of the contract, at his own cost.

29. **Confidentiality**: The bidder(s) must not divulge any confidential information and ensure that reasonable steps are taken to provide for the safe custody of any and confidential information in its possession and to prevent unauthorized access thereto or use thereof. The shortlisted bidder(s) must not, without the prior written consent of QCI, disclose any confidential information of QCI or any government department or relating to any ministry or any other party. In giving written consent to the disclosure of confidential information, QCI may impose such conditions as it thinks fit, and the bidder must comply with these conditions. Confidentiality clause shall survive for a period of one year after the termination of contract or contract expiry period.

30. No part of this document including the Annexure can be reproduced in any form or by any means, disclosed or distributed to any person without prior written consent of QCI, except to the extent required for submitting the bid and no more. The information contained in this document is only disclosed for the purposes of enabling potential Vendors to submit a proposal to QCI. This document should not therefore be used for any other purpose. This document contains proprietary information furnished for evaluation purposes only; except with the written permission of the QCI, such information may not be published, disclosed, or used for any other purpose. The bidding firms acknowledge and agree that this document and all portions thereof, including, but not limited to, any copyright, trade secret and other intellectual property rights relating thereto, are and at all times shall remain the sole property of QCI. The title and full ownership rights in the information contained herein and all portions thereof are reserved to and at all times shall remain with QCI. Vendors must agree to take utmost care in protecting the proprietary and confidential nature of the information contained herein.

31. **Payment Milestones**:
QCI will make payment to the vendor as per the following milestones:

S. No.	Milestone	Payment Schedule
1	On successful Supply, Installation, Testing and Commissioning at site.	75%
2	On successful User Acceptance including Go-Live up to the satisfaction of Client	20%
3	Completion of Defects Liability Period of 12 months	5%

i. Payment shall be made after submission of invoices within 30 days of receipt of invoice complete in all respect.
ii. Incorrect Invoices, Under/Over Payment: In case an invoice is found to have been rendered incorrectly after payment, any underpayment or overpayment will be recoverable by or

from the vendor, as the case may be, and, without limiting recourse to other available means, may be offset against any amount subsequently due by QCI to the vendor under this contract.

32. **Penalty**: Penalty may be imposed on non-performance/ violation of any of the terms and conditions mentioned in this RFP. The quantum of such penalty shall be as decided by the committee of officials (constituted by QCI). The following shall be the treatment in case of damages and delays:
    i. Any damage to the building or to any equipment which might result during the repair shall be repaired by the Vendor.
    ii. If the job is not completed within the stipulated time penalty amount @ 1% (of the contract value) per week or part thereof, subject to cap of 10% of total contract value will be applicable on the vendor, provided such delay is not attributable to QCI.

    The work must be completed as stipulated in the acceptance of the tender should be deemed to be the essence of the contract and delivery must be completed no later than the dates specified therein. Extension will not be given except in exceptional circumstances. However, if the work is completed after expiry of the contracted completion period without prior concurrence of QCI, such delivery will not deprive QCI of the right to recover liquidated damages.

33. QCI, by issuance of this RFP does not necessarily indicate or imply that the project will be commenced. The Vendor will absolve QCI of all responsibilities if the project does not start within a stipulated timeframe. QCI reserves the right to withdraw this assignment any time without prior consultation or intimation to the Vendors.

34. The Vendor shall not make any alteration / changes in the bid after the closing time and date. Unsolicited correspondence from the Vendor will not be entertained.

35. If at any stage of the tendering process or during the carrying out of the agreement any suppression / misrepresentation of such information is brought to the knowledge of QCI, QCI shall have right to reject the bid or terminate the agreement, as the case may be, without any compensation to the Vendor.

36. The Vendor shall be deemed to have complied with all clauses in this RFP. Evaluation shall be carried out on the available information in the bid.

37. The firms / agencies submitting their proposals would be responsible for all of its expenses, costs and risks incurred towards preparation and submission of their proposals, attending any pre-proposal meeting and visiting the site or any other location in connection therewith. QCI shall, in no case, be responsible or liable for any such costs whatsoever, regardless of the outcome of the process.

38. The proposals submitted by the firms/agencies shall remain valid for a period of 120 days after the closing date (deadline) for submission of proposals prescribed in this document.

39. During evaluation, QCI may, at its discretion, ask the respondents for clarifications on their proposals. The firms/agencies are required to respond within the time frame prescribed by QCI.

40. QCI may at its sole discretion and at any time during the evaluation of proposal, disqualify any respondent, if the firm:
    i. Submitted the proposal after the response deadline
    ii. Made misleading or false representations in the forms, statements and attachments submitted in proof of the eligibility requirements

iii. Exhibited a record of poor performance such as abandoning works, not properly completing the contractual obligations, inordinately delaying completion or financial failures, etc. in any project in the preceding three years
iv. Submitted a proposal that is not accompanied by required documentation or is non-responsive, failed to provide clarifications related thereto, when sought
v. Submitted more than one proposal
vi. Was declared ineligible by the Government of India/State/UT Government for corrupt and fraudulent practices.

41. **Obligation:** The vendor,
    i. must at all times comply with
        a. all Applicable Laws; and
        b. without limiting, all applicable anti-bribery, anti-corruption, anti-money laundering, trade sanctions and export control, modern slavery (including without limitation forced or compulsory labour, child labour, physical abuse, and withholding of identity papers), equal opportunity, anti-discrimination, health and safety, and environmental laws, rules, and regulations ("Compliance Laws");
    ii. shall ensure that any and all notices and instructions issued by QCI or state/Centre government in relation to any Applicable Laws are obeyed by its personnel and any visitors to the Site;
    iii. warrants that it and its officers and its current and historical Affiliates have never materially violated any Compliance Laws, nor been the subject of any government indictment, nor had any fines, penalties or settlement agreements with any government agency in the past five years that resulted in material financial costs, or negatively affected its ability to operate;
    iv. must at all times have due diligence procedures for its operations as well as for participants in its supply chains adequate to ensure that there is no modern slavery or human trafficking in it or its supply chains;
    v. must not engage any third party that at any time engages in modern slavery;
    vi. must not provide work environments that are unsafe or unhealthy for anyone;
    vii. must minimize adverse effects on the community, environment, and natural resources;
    viii. must notify QCI as soon as it becomes aware of any actual or suspected bribery, corruption, money laundering, slavery, human trafficking, discrimination, or breach of health and safety or environmental laws, in its own operations or supply chain;
    ix. must endeavour to maintain records tracing the supply chain of all goods and services provided under this Agreement and make immediately available to QCI upon its request all such records.
    x. Must intimate QCI Authorised Person before proceeding for any drilling/breaking of existing structures and take prior approval before proceeding.
    xi. All the cost related to temporary arrangement of Electricity and Water required for construction till successful completion of the project (even in case of bill generated from meter reading) shall be borne by the Vendor only and ensuring proper health, safety and environmental compliances and deemed to be included in the Contract value.
    xii. The vendor shall ensure a healthy and cordial work environment and ensure proper coordination with the QCI Authorised Person /sub vendor and other stakeholders with utmost integrity without indulging in arguments/ fights over sharing of project components amongst each other.

42. **Sustainability:** The vendor will,
    i. endeavour to embed appropriate sustainability practices in its business and supply chain policies and procedures;

ii. promote age, racial, cultural, disability, gender and religious diversity and inclusivity of employees across its business and its supply chain, except where law prohibits;
iii. adopt carbon reduction principles for its business and obtain similar commitments from its service vendors, subvendors, agents and distributors;
iv. adopt approaches to maximize positive social impacts of its practices such as buying locally, promoting skills development through apprenticeships, employee training and promotion and offering employment opportunities to the local community; and
v. pay all employees, as a minimum, the national or local minimum wage as required by law or regulations.

43. **Audit and Access**: QCI (or their authorised representative) may conduct audits relevant to the performance of the vendors' obligations under this Agreement. Audits may be conducted of:
    i. the Vendor's operational practices and procedures as they relate to this Agreement, including security procedures;
    ii. the accuracy of the Vendor's invoices and reports in relation to the provision of the Services; the Vendor's compliance obligations under clause 41;
    iii. the Vendor's compliance with its confidentiality, privacy and security obligations under this Agreement;
    iv. Work Product (including books and records) in the possession of the Vendor relevant to this Agreement; and
    v. Access any other matters determined by QCI to be relevant to the agreement. QCI (or their authorised representative) may, at reasonable times and on giving reasonable notice to the Vendor, and to the extent relevant to the performance of this Agreement:
        a. access the premises of the Vendor;
        b. require the provision by the Vendor, its personnel or sub-vendors, of records and information in a data format and storage medium accessible by QCI;
        c. inspect and copy Work Product (including original documentation, books and records), however stored, in the custody or under the control of the Vendor, its personnel or sub-vendors; and require any other reasonable assistance from the Vendor or its personnel in respect of an audit relevant to the performance of the Vendor's obligations under this Agreement.
        d. The Vendor must provide access to and reasonable assistance requested to use its computer hardware and software to the extent necessary for QCI to exercise its rights under this clause.

44. **Energy, Water and Waste Monitoring:** Waste material, scrap, off-cuts, or packaging shall not be removed from site by any vendor or supplier unless weighted and recorded. Energy, Water and Waste monitoring shall be recorded by the relative consuming or disposing vendor or supplier, with the main vendor or lead vendor responsible for information collation, including values being tallied and reported during regular construction meetings and recorded in construction meeting minutes.

45. **Discrimination and Prejudice:** The vendor should not permit the following:
    i. Discriminating against individuals or vulnerable segments of society (including minority groups), whether that discrimination is based on race, colour, gender, sexual orientation, religion, disability or otherwise.
    ii. Mistreating or limiting the rights of minority groups, including women.

46. **Freedom of Association:** The vendor should not prevent workers from freely joining or participating in a workers' association or union in accordance with national or local laws.

47. **Security requirements:**

i. Vendors shall remain responsible for safeguard of their men and material, and they shall deploy necessary security guards at the entry/exit point and restrict unauthorized entry.
ii. Check all workers who enter the site with site identity card, wearing a hard hat, illuminating vest and safety shoes. Those without safety gears be restricted from entering floor.
iii. Co-ordinate with QCI in case of any emergency and by way of passing the information to project manager/Safety manager.
iv. Be first responder in case of any evacuation required inside the building.
v. Keep a vigil on all material entry/exit and ensure delivered material are not taken back by the workers or any other unauthorized entrants.
vi. The security guards deployed shall be mandatorily trained as first aiders and firefighting techniques.
vii. It is the sole responsibility of every Vendor and QCI project manager to ensure every personnel before being engaged at site shall undergo site HSSE induction.
viii. Dedicated safety induction space must be provided by the vendor for on-site induction.
ix. Every personnel seeking work at sites managed by QCI shall necessarily produce a proof of identity, age and address issued by Government of India (E.g. – Aadhaar, Driving License, Voter identity card or Ration card) In case of expats a passport.
x. Every worker shall be subjected to medical examination by the qualified medical examiner as per the requirements of building and other construction workers act and rules made thereunder, such medical examination record be maintained at site for all workers.
xi. Every worker irrespective of the type of the job they perform at site shall mandatorily undergo site HSSE induction as per QCI standard induction process. Attendee shall affix their signature for having attended HSSE induction.
xii. Every construction worker only after successful completion of above steps shall enter QCI construction site only after receiving an identity card.
xiii. All visitors intending to enter site shall undergo visitor induction and mark their entry in the visitor register.
xiv. All visitor entering site shall undergo visitor's induction and in case of such visitors are required to do a site visit for one time or for short span, such visitors shall always be accompanied by the host who is previously holding site identity card.
xv. Arrangement of audio-visual system shall be done for induction of all new entrants at site. The induction material shall be based on the site requirement.
xvi. QCI project managers shall incorporate client specific requirements also on need basis and consider such requirements also during the induction.

48. **Incident reporting and investigation:**

i. 1 hour from the time of the occurrence of incident.
ii. Vendor shall ensure all incidents are reported to QCI in the prescribed format.
iii. Vendor shall at no time delay the injured from treatment, the personnel must be taken to site paramedic or to the nearest hospital without any delay.
iv. Vendor shall immediately start investigation of the incident immediately after the occurrence of the incident and shall submit the report to QCI within 5 working days.
v. Vendor shall ensure; statutory agencies are kept informed as per the requirements of the applicable law.

49. **Worker engagement & motivation:**

i. QCI encourages all workers including engineers to perform 10-minute body exercises before start of the work every day.

ii. All Vendors shall conduct safety motivation program at least once a month, all projects shall have an earmarked budget to conduct such event.
iii. QCI encourages rewarding workers who has practiced safe practices and recognize them by way of simple giveaways.
iv. All engineers shall develop the habit of appreciating the safe work practices adopted by workers, quick appreciation on the spot is advisable.
v. Workers including engineers at construction site shall develop the culture of intervening immediately in case of any imminent threat to life and limb of an individual, this irrespective of the Vendor packages.

50. **Communication and Consultation:**
i. Every works in-charge shall explain the safe work method statements during the toolbox talk.
ii. No work shall be started without trade wise toolbox talk.
iii. No worker shall be involuntarily subjected to perform a task that the person feels it is unsafe to perform, worker be given a right to reject to perform an unsafe task.
iv. Every project manager shall conduct at safety committee meeting once a week along with all Vendors to and assess safety performance on weekly basis.
v. Every project manager shall conduct at least one safety committee meeting once a month and include equal number of engineers and workers from each Vendors.
vi. Safe work method statements shall be made available to all workers at a communication board commonly accessible to all workers.
vii. Material safety data sheets be made available for all chemicals at common communication board accessible to all concerned.
viii. Vendors shall install adequate number of posters and signs to caution workers of imminent hazards.

51. **Adherence to relevant Codes, regulations, Acts and guidelines:** The Vendor is required to adhere to all relevant standards, regulations, acts but not limited to:
- IS 13252:2010 - Information Technology Equipment - Safety
- IS 14700:1999 - EMC requirements for Information Technology Equipment
- IS 3043:2018 - Code of Practice for Earthing
- IS 732:2019 - Code of Practice for Electrical Wiring Installations
- IS 11171:1985 - Dry-type power transformers
- IS 9000 (various parts) - Environmental testing for electronic equipment
- IS 16242 (Part 1):2014 - Safety requirements for IT equipment
- IS 13947 (Part 3):1993 - Specification for Low Voltage Switchgear and Control gear
- Information Technology Act, 2000 (amended in 2008)
- Indian Telegraph Act, 1885
- Indian Wireless Telegraphy Act, 1933
- The Electricity Act, 2003
- The Energy Conservation Act, 2001
- Environment (Protection) Act, 1986
- E-Waste (Management) Rules, 2016
- National Building Code of India, 2016
- The Occupational Safety, Health and Working Conditions Code, 2020

- The Code on Wages, 2019
- The Industrial Relations Code, 2020
- The Code on Social Security, 2020
- TRAI (Telecom Regulatory Authority of India) guidelines
- Department of Telecommunications (DoT) regulations

52. **Penalty applicable for Safety lapses:** If the vendor does not adhere to the QCI Authorised Person safety regulations, penalty will be imposed as per the following table:

No	Offence	Charge to Company for each H&S breach
1	Smoking in an unauthorized area or consumption of alcohol or use of illegal substances	Rs 2,500
2	Burning of waste or smoldering of combustible materials on site other than for heat treatment processes required for the execution of the Works	Rs 2,500
3	Failure to wear personal protective equipment (PPE) eg .safety helmets, safety boots, goggles, respirator, ear plugs, safety belts, which shall include failure to anchor belt to a secure structure Where any site operation requires the use of PPE then all workmen must use the required PPE eg grinding, welding, burning, unloading hazardous materials etc.	1. Rs 2,500 per worker when lack of enforcement of the usage of PPE by the Vendor is observed or 2. Rs 10,000 where issuance of the required PPE by theVendor is not carried out.
4	Failure to attend general safety induction course conductedby the Project Manager	1. Rs 2,500 per worker for not attending the course and 2. Workers to attend coursewithin 2 working days or be dismissed.
5	Failure by Engineers to attend a notified site safety meeting	Rs 2,500 per employee +Rs 10,000 per company
6	Improper handling or disposal of electronic waste or hazardous materials (e.g., batteries, cleaning solvents)	Rs 10,000
7	Failure to report accidents or near-misses related to IT system installation within 24 hours	Rs 10,000
8	Damage to or misuse of client's IT equipment or infrastructure	Rs 10,000 + cost of repair/replacement
9	Failure to maintain a clean and orderly work area during IT system installation, posing fire or trip hazards	Rs 10,000 + cleanup costs
10	Obstruction of server room access, emergency exits, or blocking of ventilation systems	Rs 10,000
11	Use of non-certified or untested IT equipment or tools during installation	Rs 10,000
12	Improper cable management or installation practices that pose safety risks	Rs 10,000

53. **Handing Over Schedule:** On completion of all items of work as per contract, the Vendor shall hand over the works to QCI as per the format specified by PMC/QCI along with supporting documents. The handing over of the completed works in all respect to QCI (officially in writing) shall be the responsibility of the Vendor. The defect liability period will commence from the date of handing/taking over to the QCI. The process of handing over shall be as under:

i. In advance of the stipulated date of completion, joint inspection shall be carried out with Design Consultant, PMC and QCI Authorized Person and all the defects, deficiencies shall be

noted and a time bound programme to be made for rectifying all the defects and deficiencies. After rectifying all defects, deficiencies at its own cost up to the satisfactions of Design Agency, PMC and QCI Authorized Person, the vendor shall handover the building premises to QCI.

ii. The Vendor shall remove at his own cost all surplus materials, debris, material waste, labour hutments before handing over to QCI. If it is felt that the Vendor is not responding to rectify the defects urgently and the QCI is suffering in using the assets created due to default of the contract, QCI shall be entitled to get the defects rectified at the risk and cost of the Vendor at any time after expiry of 24 hours' notice issued to the Vendor.

54. **Other Conditions:**

i. Other vendors working at site will also simultaneously execute the work. The vendor shall offer necessary cooperation to other vendors wherever required.

ii. Any malva / building rubbish generated is to be removed from the site within 24 hours.

iii. Engineer/Supervisor shall carry mobile telephone (s) to enable the QCI Authorized person to have easy and quick communication. ***Nothing extra shall be paid to the vendor*** on this account and his ***quoted rates*** for various items under this contract will be ***inclusive of this obligation.***

iv. The staff employed by the vendor should be well behaved and any complaint of misbehaviour shall be taken very seriously and such staff will have to be removed by the vendor immediately from the site.

v. The dismantled materials shall be taken away and disposed off by the vendor at his cost. ***Nothing extra shall be paid to the vendor.***

vi. The vendor shall make all safety arrangements required for the labour engaged by him at his cost. All consequences due to negligence on behalf of security / safety or otherwise shall be on the vendor. The QCI shall not be responsible for any mishap, injury, accident or death of the vendor's staff. No claim in this regard shall be entertained / accepted by the QCI.

vii. The vendor shall be responsible for the watch and ward / guard of the buildings, till the building is physically handed over to the QCI. No extra payment shall be made on this account.

viii. The Vendor shall make all necessary arrangements for protecting from rains, fog or likewise extreme weather conditions, the work already executed and for carrying out the further work, during monsoon including providing and fixing temporary shelters, protections etc. ***Nothing extra shall be payable*** on this account. Also, no claims for hindrance shall be entertained on this account.

55. **Quality Assurance**

i. The proposed building is a prestigious project of QCI and quality of work is of paramount importance. Vendor shall have to engage well-experienced skilled labour and deploy modern T&P and other equipment to execute the work.

ii. The vendor shall ensure quality construction in a planned and time bound manner. Any sub-standard material/work beyond set out tolerance limit ***shall be summarily rejected*** by the QCI Authorized person & vendor shall be bound to replace/ remove such sub-standard/defective work immediately. If any material, even though approved by QCI Authorized person is found defective or not conforming to specifications shall be replaced/removed by the vendor ***at his own risk & cost.***

iii. The vendor shall submit, a detailed and complete method statement for the execution, testing and Quality Assurance of works. All the materials to be used in the work, to give the finished work complete in all respects, shall comply with the requirements of the

specifications and shall pass all the tests required as per specifications as applicable or such specifications / standards as directed by the QCI Authorized person. However, keeping the Quality Assurance in mind, the Vendor shall submit, on request from the QCI Authorized person, his own Quality Assurance procedures for basic materials and such items, to be followed during the execution of the work, QCI Authorized person.

iv. All materials and fittings brought by the vendor to the site for use shall conform to the samples approved by the QCI Authorized Person which shall be preserved till the completion of the work. If a particular brand of material is specified in the item of work in Schedule of Quantity, the same shall be used after getting the same approved from QCI Authorized person. Wherever brand/quality of material is not specified in the item of work, the vendor shall submit the samples as per suggested list of brand names given in the tender document for approval of QCI Authorized person. For all other items, materials and fittings of ISI Marked shall be used with the approval of QCI Authorized person.

56. **Non-Tender items** / **Rates for extra items of works:** Any item of work carried out by the Vendor on the instructions of the QCI Authorized person, which is not included in the accepted schedules of rates, shall be executed at the rates of L1 quotation taken from the rate analysis conducted by QCI.

57. **Disclaimer:** QCI shall not be responsible for any late receipt of applications for any reasons whatsoever. The applications received late will not be considered.
QCI reserves the right

i. To reject any/all applications without assigning any reasons thereof.
ii. To relax or waive any of the conditions stipulated in this document as deemed necessary in the best interest of the QCI without assigning any reasons thereof.
iii. To include any other item in the Scope of work at any time after consultation with applicants or otherwise
iv. To adopt method deemed fit to evaluate the proposals
vi. To select multiple Vendors for the project for allocation of work in different areas if it meets the essential criteria for qualification.

VI. SUBMISSION OF PROPOSALS

The intending vendor is expected to prepare proposals covering the following aspects:

A. The "Technical Bid" shall contain the following:

i. Signed and stamped Form-1, 2, 3, 4, 5, and 6 attached under Annexure-A
ii. EMD details (Bid security as per RFP)
iii. Original Power of Attorney for the Authorised Representative
iv. Work Orders/Letter of award/Experience Certificate issued by Client in support for experience of similar works detailed in Clause III: Eligibility Criteria.
v. Copies of ISO related certificate.
vi. Bid Specific Manufacturer' s Authorization Form (MAF) from OEMs as per Form 6 of Annexure A.
vii. Item compliance sheet to be signed by authorised signatory ***– no price/rate shall be mentioned in the item compliance sheet/.*** **Non-compliance to this will be liable for rejection.**
viii. Any other details that the bidder may like to provide.

B. The "Price Bid" shall contain the following:

i. The Vendors should submit the proposal as per the forms in Annexure B through online mode only in relevant sections in GeM Portal (https://gem.gov.in)
ii. Taxes should be included in the above proposal.

Submission Details:

1. The Applicants shall submit the proposals online through GeM Portal (https://gem.gov.in) as per the date and time mentioned on the GeM portal. It is the responsibility of the Applicant to submit the bid before the last date and time on the online portal, and QCI shall not be responsible for any delay due to any of the technical/server issues.
2. The Applicant shall submit the Proposal in the form and manner specified in this RFP. Bid proposals received in the physical form at the client's address will not be accepted.

For any queries, you may contact the below:
Procurement Team, QCI Email id: procurement@qcin.org

ANNEXURE – A

Form 1: Covering letter with the Proposal in response to RFP Notice

(To be submitted on the Letterhead of the responding firm)

To,

Deputy Director (Accounts),
Quality Council of India,
Institution of Engineers Building,
2nd Floor, 2, Bahadur Shah Zafar Marg,
New Delhi-110002

Subject: Submission of proposal in response to the RFP for "**Supply, Installation, Testing and Commissioning of IT systems at QCI Office, WTC, Nauroji Nagar, New Delhi**".

Dear Sir,

1. Having examined the RFP document, we, the undersigned, herewith submit our proposal in response to your RFP dated <dd/mm/yy> for "<RFP Name>", in full conformity with the said RFP document.
2. We undertake, if our proposal is accepted, to adhere to assign a team dedicate to this project.
3. We have read the provisions of RFP and confirm that these are acceptable to us. We further declare that additional conditions, variations, deviations, if any, found in our proposal shall not be given effect to.
4. We undertake, if our proposal is accepted, to adhere to the scope of engagement or such modified plan as may subsequently be mutually agreed between us and QCI or its appointed representatives.
5. We agree to unconditionally accept all the terms and conditions set out in the RFP document and also agree to abide by this bid response for a maximum period of 120 days from the date of closing of bid and it shall remain binding upon us with full force and virtue, until within this period a formal contract is prepared and executed, this bid response, together with your written acceptance thereof in your notification of award, shall constitute a binding contract between us and QCI.
6. We affirm that the information contained in this proposal or any part thereof, including its exhibits, schedules, and other documents and instruments delivered or to be delivered to through this proposal is true, accurate, and complete.
7. This proposal includes all information necessary to ensure that the statements therein do not in whole or in part mislead the QCI as to any material fact. We agree that QCI is not bound to accept the lowest or any bid response you may receive. We also agree that you reserve the right in absolute sense to reject all or any of the products/ service specified in the bid response without assigning any reason whatsoever.
8. We confirm that we have not been blacklisted by any central or state government agency, PSU etc. in the last 5 years preceding the Proposal Due Date.

It is hereby confirmed that I/We are entitled to act on behalf of our corporation/company/ firm/organization and empowered to sign this document as well as such other documents, which may be required in this connection.

Dated this Day of (Year)
(Signature) (In the capacity of)
Duly authorized to sign the Bid Response for and on behalf of:
(Name and Address of Company) Seal/Stamp of Vendor

Form 2: Relevant Project Experience for completed projects

Completed Projects:

S. No.	Area/ Location	Client name	Name and Size of the project	Executed Contract Value	Completion date	Nature of works

Form 3: Details of the responding firm

Section No.	S. No.	Particular	Detail
I	**COMPANY PROFILE:**		
	1.	Name of the Organization * (As appearing on PAN Card)	
	2.	Registered Office Address *	
	3.	**SPOC for the bid submitted**:	
		Name:	
		Mobile no.:	
		Email Address:	
	4.	**Address for Billing Office***	
		Name of Contact Person *	
		Contact No. *	
		Mobile No.	
		E mail ID *	
	5.	**Name of Contact Person (Finance & Accounts) ***	
		Contact no.	
		Mobile no.	
		E mail ID *	

II	**STATUTORY DETAILS:**		
	1.	**GST Details: -**	
		Whether Registered Assessee (Yes or No)	
		If Yes: -	
		GSTIN Number # *	
		Type of Assessee	
	2.	**MSME**	
		Whether Registered under MSME (**Yes or No**) *	
		If Yes: -	
		MSME Registration No. and validity date # *	
	3.	Permanent Income Tax No. (PAN) #	
	4.	**NATURE OF ENTITY:** * **PROPRIETOR/PARTNERSHIP/ LPP/ PRIVATE LIMITED /PUBLIC LIMITED/GOVERNMENT**	
	5.	**WHETHER FUNCTIONING IN A SPECIAL ECONOMIC ZONE. (SEZ) (YES/ NO) ***	

III	BANK DETAILS: -		
		Name of Bank	
		Address of Bank	
		Bank Account No.	
		IFSC Code	
		SWIFT CODE (If party's billing address is outside India)	

IV	Details of responding Company		
1.	Current Year Turnover (Rs Crores) from similar services in India;		
2.	Company ProfileOperations in India)		
2.1	Average turnover from Indian Operations	(Turnover in Rs Crores)	
2.2	Full-time professional staff engaged in related services	(Number of Staff)	
2.3	Extent of operations in India (national spread) i.e. number of offices in India (client specific / project specific offices should not be taken into account)	(Number of Offices in different cities/towns and their address)	
3.	Company Experience		
3.2	Experience of working on similar Specifications		(Number of Projects and their brief description)

Declaration by Director/ Proprietor/ Partner:

I/We declare that the information furnished above are correct to the best of my/our knowledge / belief. I/We undertake to inform you of any change in above particulars at the earliest.

Form 4: Format for Non-Blacklisting Undertaking

(To be submitted on the Letterhead of the responding firm)

To,
Deputy Director (Finance & Accounts),
Quality Council of India,
Institution of Engineers Building,
2nd Floor, 2, Bahadur Shah Zafar Marg,
New Delhi-110002

Subject: Non-Blacklisting declaration in connection with RFP Ref. No. _____ dated____ for _____

Dear Sir,

This is to notify you that our Firm/Company/Organisation _____ intends to submit proposal in response to invitation for Tender Ref. No. _____ for <>. In accordance with the above, we declare that:

a. We are not involved in any major litigation that may have an impact of affecting or compromising the delivery of services as required under this agreement
b. We are not blacklisted by any Central/ State Government/ agency of Central/ State Government of India or any other country in the world/ Public Sector Undertaking/ any Regulatory Authorities in India or any other country in the world for any kind of fraudulent activities in the last 5 years preceding the Proposal Due Date

Dated this Day of (Year)
(Signature) (In the capacity of)
Duly authorized to sign the Proposal Response for and on behalf of:
(Name and Address of Company) Seal/Stamp of Bidder

Form 5: Certificate of Compliance of Specifications

(to be signed on letterhead of the company)

Technical Requirements

Tropical Conditions

All equipment/material supplied against respective Specification shall be suitable for satisfactory continuous operation, storage & maintenance under tropical conditions as specified below:

- Ambient temperature: 45 degree Celsius
- Annual Average Relative humidity: 50%
- Isokeraunic level (days per year): 50
- Seismic Zone: Zone-IV
- Climate type: Moderately hot and humid tropical, climate, conducive to rust and fungus growth

General

The Security work shall be carried out in accordance with Indian Standard Code of Practice. It shall also be in conformity with the current Indian Electricity rules and regulations and requirements of the Local Electricity Supply authority and Fire Insurance regulations so far as these become applicable to the installation.

The scope includes the jobs to be performed for all equipment and materials furnished under this specification. The scope is however not limited to the items detailed below:

- Design, manufacture, testing at manufacturers works packing and dispatch.
- Transportation to site and insurance.
- Receiving at site, unloading, handling, opening, inspecting, reporting and submitting claims in case of damages and short supply items.
- Arranging to repair/re-ordering all damaged and short supply items.

I. SPECIFICATION

- **Special Condition for System Integrator:**
- The Contractor will supply and install the equipment necessary to meet the requirements and provide all labour and materials, whether or not described in full, necessary to produce complete and fully operational systems in accordance with the intent of this document.
- The Contractor/ Agency must familiarize himself with the site drawings and the scope of the facilities that is required in the various areas. Should ensure that agency is aware of the operational requirements under which the systems and associated facilities are to be installed and used.
- All employees used by the contractor/agency to install this system must be competent technicians who are experienced in the installation and interconnection of systems.
- Bidder shall be authorized by the manufacturer of the major components of the system to sell their products and initiate warranty service on the same items for this project. Manufacturing authorization letter must be submitted for this Work addressing to Client stating that bidder is authorized to provide sales and services on behalf of OEM.

- In view of the above, commissioning and programming will have to be carried out to integrate all the system architecture hardware and software
- **Submittals:**
    - Compliance Statement- (Mandatory)
    - Datasheet- (Mandatory- Relevant Pages only)
    - Bill of Quantity- (Mandatory)
    - Drawings as required.
    - Manufacture Authorization Letter (Mandatory)
    - OEM Partner Certification
    - No Deviation Certificate (for Technical Compliance) on OEM letter head (Mandatory).
- **Makes and Models**: - It is mandatory to provide make, and model of the items and their subcomponents as has been sought in the technical bid. Please note that substituting required information by just brand name is not enough. Bidder should not quote hardware or software items which are impending End of Life or End of Support during the contractual period.
- **Software, Drivers, and Manuals**: - The bidder shall supply along with each item, all the related documents, Software Licenses and necessary media of the software loaded in the equipment without any additional cost. The media and documents shall be in English. These will include, but not restricted to, User Manual, Operation Manual, Other Software and Drivers etc.
- **Warranty:** The Contractor/ Agency shall Warranty that all provided material and equipment will be free from defects, workmanship and will remain so, for a period of 12 months from after equipment/materials have put into the service or from date of final acceptance of system by Engineer In charge / Consultant whichever is earlier.
- The Contractor/ Agency shall provide summary of all equipment's serviced quarterly during this Warranty period to facility in charge. The report shall clearly mention services rendered, parts replaced, and repairs performed.
- **Software & Programming:**
- Any software, license or programming, whether or not specifically mentioned, but if required for successful installation, testing, commissioning and functioning of all equipment and systems installed by the contractor, the same shall be in the scope of the contractor. All such software required shall be fully loaded, genuine, latest versions, shall be as per OEM's specifications/ recommendations, shall not be trial versions or limited- feature or limited-period versions (unless the specified Model no. / Code no. means so) and shall not involve any extra or recurring cost.
- The rate quoted by the contractor shall be inclusive of all such required software and programming and the contractor shall be responsible for making the entire system operational as per tender specification and no extra shall be paid to the contractor on this account.

- **Compatibility of System**
- It shall be contractor's obligation to ensure that all the software, hardware, equipment, and IT systems, including input-output connectors/ port/ terminals, are seamlessly compatible with one another. Any specific provisions, if required to be made on this account this, shall be done by the contract without compromising the performance of the IT system and without any extra cost. The rate quoted by the contractor shall be inclusive of all such required software and programming and no extra shall be paid to the contractor on this account.
- The contractor shall ensure that the equipment being proposed are the prevalent models/ series of the OEM.

Technical Specification of LAN System

Core Switch		
S. No	**Specifications**	**Compliance (Yes/No)**
1	**General Features**	
2	Switch should be 1U and rack mountable in standard 19" rack.	
3	Switch / Switch's Operating System should be tested for EAL 2/NDPP or above under Common Criteria Certification.	
4	Switch should be MTCTE (Mandatory Testing & Certification of Telecommunication Equipment) Certified and Certificate issued by TEC (Telecommunication Engineering Center), Department of Telecommunications must be submitted.	
5	Switch should be quoted with 05 years of TAC Support & 5 years Hardware Warranty with advance hardware replacement.	
6	Switch should have minimum 4 GB RAM, 4 GB Flash and 8MB packet buffer or more.	
7	Switch should support operating temperature from 0^0 to 45^0 degree Celsius.	
8	**Hardware Architecture**	
9	Switch should have 24 Ports of 1/10G SFP+, 4 Ports of 1/10G SFP+ or 4 ports of 25G SFP28 and 2 x 40G or 1 x 100G QSFP28 Uplink/Stacking Ports from Day 1. Switch should support total of 4 x 40G QSFP28 or 1 x 100G QSFP28 Ports in future by installing the interface module. Switch should support 1G Base T & 10G Base-T Copper RJ-45 Transceiver to connect with any legacy device with 1Gbps port. Switch must be supplied with redundant hot swapable fan trays & dual redundant power supply.	
10	I.Switch should support physical stacking of 200Gbps with 10 Switches or more in a single stack. II. Switch should also support long distance stacking upto 10KMs.	

	III. Switch should support aggregated stacking bandwidth of 2000Gbps or more.	
11	Switch should have the following interfaces: I. USB Type-C, RJ-45 Serial Port for Serial Console Management II. USB Type-A for external file storage III. RJ-45 Ethernet Port for Out of Band Network Management	
12	**Performance**	
13	Switch shall have minimum 1Tbps of switching fabric and 800 Mpps of forwarding rate.	
14	Switch shall have minimum 96K MAC Addresses and 4000 VLAN.	
15	Should support minimum 90K IPv4 and 8K IPv6 routes or more	
16	Switch shall have 8K multicast groups or more.	
17	Switch should support 512 or more STP Instances.	
18	Switch should support trunking, 32 ports per trunk & min. 256 trunk groups or more	
19	Switch must support MACSEC Protocol.	
20	Switch must support High Availability (HA) functionality using M-LAG (Multi-Chassis Link Aggregation Group)/MC-LAG (Multi-Chassis Link Aggregation Group)/ VPC (Virtual Port Channel) etc. with independent management & Control Plane	
21	**Layer 2, Layer 3 & Security Features**	
22	Switch should support IEEE Standards of Ethernet: IEEE 802.1D, 802.1s, 802.1w, 802.1x, 802.3ad, 802.3x, 802.1p, 802.1Q, 802.3, 802.3u, 802.3ab, 802.3z, UDLD and VXLAN.	
23	Switch must have IPv4 & IPv6 routing static routing, ECMP, RIP, RIPnG, OSPFv2, OSPFv3, VRRP, VRRP-E (IPv4 & IPv6), VRRP v3 -IPv6, PIM-SM, PIM-SSM, PIM-DM, PIM-Passive (IPv4 & IPv6), MSDP, BGP4, BGP4+ (IPv6), VRF, PBR and QoS features from Day 1	
24	Switch should support RSPAN, ER-SPAN, LLDP, Configuration Archive, Replace & Roll Back.	
25	Switch shall have 802.1p class of service, marking, classification, policing and shaping and eight egress queues.	
26	Switch should support management & authentication features like sFlow or equivalent, SSHv2, SNMPv2c, SNMPv3, NTP, MAC Authentication, Web Authentication, Flex Authentication, RADIUS, Encrypted Syslog (RFC 5425), RADSEC (RFC 6614) and TACACS+ Authentication.	
27	Switch should support IPv6 Binding Integrity Guard, IPv6 Snooping, IPv6 RA Guard, IPv6 DHCP Guard, IPv6 Neighbor Discovery Inspection and IPv6 Source Guard.	
28	Switch should support 802.1x authentication and accounting, IPv4 and IPv6 ACLs and Dynamic VLAN assignment	
29	Switch must support protection Dynamic ARP Inspection, DHCP Snooping, Protection against Denial of Service (DOS) attacks	
30	During system boots, the system's software signatures should be checked for integrity. System should be capable to understand that system OS are authentic and unmodified, it should have cryptographically signed images to provide assurance that the firmware & BIOS are authentic.	

31	Switch must support Open Flow 1.3 or latest for SDN (Software Defined Networking), REST API, Ansible for automation	
32	**Manageability**	
33	Should support manageability using on prem Centralized Management platform using Web based Graphical User Interface (GUI) and should support the remotely manageability from the Cloud.	
34	It shall support Integrated Standard based Command Line Interface (CLI), Telnet, TFTP, HTTP access to switch for management/monitoring	
35	All Switches Core, Distribution and Access Switches shall have the similar command line for ease of operation & maintenance	
36	**Mandatory Certification & Compliance**	
37	Switch shall conform to IS 13252-1 or IEC 60950-1 or IEC: 61368-1 Annex-A for Safety requirements of Information Technology Equipment as per TEC Standard. TEC certificate to be furnished along with the bid.	
38	Switch shall conform to TEC EMI EMC Standard EN 55032 Class A/B or CISPR32 Class A/B or CE Class A/B or FCC Class A/B	
39	Switch shall conform to TEC EMI EMC Standard EN/IEC 61000-4-2, EN61000-4-3, EN61000-4-4, EN61000-4-5, EN 61000-4-6, EN 61000-4-11, EN 61000-4-29 Annex B and ROHS 6.	
40	OEM should not share land border with India. Declaration on the OEM letter head to be submitted for the same.	
41	OEM should have ISO 9001:2015 certification	
42	All switches, WiFi, WLC, Transceivers, AAA should be from the same OEM for better interoperability, management, and support	
43	OEM should have 7-8 RMA depots in India for faster replacements. Details to be shared on the OEM letter head.	

48Port Non PoE Access Switch		
S. No.	**Specifications**	**Compliance (Yes/No)**
1	**Product details - Please specify**	
1.1	Please mention Make, Model No. and Part Code.	
2	**Architecture & Port Density**	
2.1	Access Switch should provide 48 x 10/100/1G RJ45 Ports and 4x 1G/10G/25G SFP+ Slots, for Stacking/Uplinks, from Day 1. Hardware, including modules, or Software, including licenses, to support all the speeds listed above, should be available from Day 1	
2.2	Should support Virtual Switching System (VSS) or Virtual Chassis (VC) or Virtual Switching Extension (VSX) or equivalent Switch Clustering/Stacking feature, where the Switch Clustering feature should combine multiple switches into a single network element. Switch should support aggregated stacking bandwidth of 1000Gbps or more and 10 switches per stack or more.	
2.3	All type of access switches should be stackable with each other.	

3	**Performance**	
3.1	Should provide Switch Fabric Bandwidth Capacity of 296 Gbps, or more.	
3.2	Should provide Packet Forwarding Capacity of 220 Mpps, or more.	
4	**MAC Address and Route Table**	
4.1	Should support up to 32K MAC addresses, or more.	
4.2	Should support 16K IPv4 routes and 4K IPv6 routes, or more.	
5	**Physical Attributes**	
5.1	Should support 4GB RAM, 8GB Flash and 4MB Packet buffer or better	
6	**Layer 2 features**	
6.1	Should support Jumbo Frames (up to 9K bytes).	
6.2	Should support 4K Active VLANs, with the following features:	
	Port based VLANs	
	Dual-Mode VLANs	
	MAC-based VLANs	
	Dynamic VLAN Assignment	
	Dynamic MAC-based VLAN Activation	
	Dynamic Voice VLAN Assignment	
	VLAN mapping or VLAN Translation	
6.3	Should support Spanning Tree Protocols, with the following features:	
	802.1D Spanning Tree	
	802.1W Rapid Spanning Tree Protocol (RSTP)	
	802.1s Multiple Spanning Tree	
	802.1s Multiple Spanning Tree enhancement (MSTP+)	
	Fast Port Span, Fast Uplink Span or Equivalent	
	Compatibility with PVST/PVST+, PVRST+ and PVST+ or Equivalent	
	BPDU Guard	
	Root Guard for STP & MSTP	
	Port Loop Detection	
	Spanning Tree path cost method changes	
	MSTP path-cost configuration	
6.4	Should support Link Aggregation Groups (LAG), with the following features:	
	Static LAG	
	802.3ad Link Aggregation Control Protocol (Dynamic LAG)	
	Dynamic insertion and removal of ports	
	Support for LAG between different default port speeds	
6.5	Should support 802.1q Tunneling, with the following features	
	802.1ad (Q-in-Q) tagging	
	Q-in-Q BPDU tunneling	
	Selective Q-in-Q	
6.6	Should support Private VLANs, with the following features.	
	PVLANs with dual mode support	
	PVLAN with LAG	
6.7	Should support VLAN Registration Protocol, with the following features	

	Multiple VLAN Registration Protocol (MVRP)	
	MVRP with Per-VLAN STP and Per-VLAN RSTP	
6.8	Should support the following features	
	Unicast Reverse Path Forwarding (uRPF)	
	Remote Fault Notification (RFN)	
	Link Fault Signaling (LFS)	
	Uni-Directional Link Detection (UDLD) on Tagged and Untagged Ports	
	To limit Unknown Unicast Packet Flooding (UUFB)	
	Virtual Extensible LAN (VXLAN)	
7	**Layer 3 features**	
7.1	Should support the following IPv4 and IPv6 Layer 3 Routing features	
	Routing Between Directly Connected Subnets	
	Host routes & Virtual Interfaces	
	IPv4 & IPv6 Static Routes	
	RIP v1/v2 & RIPng	
	ECMP	
	OSPF v2, OSPF v3	
	PIM-SM, PIM-SSM, PIM-DM, PIM passive	
	Policy Based Routing (PBR)	
	VRRP v2 & VRRP v3	
	Non-Stop Routing (NSR)	
	GRE IP Tunnels	
	IPv6 over IPv4 tunnels and VRF	
	DHCP Server	
	MSDP	
8	**Quality of Service (QoS) & Traffic Management**	
8.1	**Should support the following Quality of Service (QoS) features;**	
	ACL Mapping and Marking of ToS/DSCP (CoS)	
	ACL Mapping and Marking of 802.1p	
	ACL Mapping to Priority Queue	
	Classifying and Limiting Flows Based on TCP Flags	
	DiffServ Support	
	Honoring DSCP and 802.1p (CoS)	
	Dynamic Buffer Allocation for QoS Priorities	
	Separate QoS Queuing for Unicast and Multicast	
	Priority Queue Management using Weighted Round Robin (WRR), Strict Priority (SP), and a combination of WRR and SP	
	Priority for PFC	
8.2	Should support the following Traffic Management features;	
	ACL-based Rate Limiting	
	Traffic Policies	
	Broadcast, Multicast, and Unknown Unicast Rate Limiting	
	Inbound Rate & Outbound Rate Limiting	

	CPU Rate Limiting	
9	**Software Defined Networking (SDN)**	
9.1	Should support the following SDN features and functionality;	
	OpenFlow v1.0 & v1.3	
	Hybrid Switch Mode	
	Hybrid Port Mode	
	Support for Multiple Controllers	
10	**Security**	
10.1	Should support the following Security features;	
	Layer 3 & Layer 4 ACLs	
	Layer 2 ACLs (MAC)	
	DHCP Snooping	
	DHCP Client & Server	
	Dynamic ARP Inspection	
	Neighbor Discovery (ND) Inspection	
	Protection against Denial of Service (DoS) Attacks	
	MAC Port Security	
	RADIUS/TACACS/TACACS+	
	Secure Copy (SCP)	
	Secure Shell (SSHv2)	
	Trusted Platform Module	
	Protected Ports	
	IP Source Guard (v4 & v6)	
	IPv6 RA Guard	
	RADSEC	
10.2	The Switch should support the following Authentication features;	
	Authentication, Authorization, and Accounting (AAA)	
	802.1X Authentication and Accounting	
	MAC Authentication and Accounting	
	Web Authentication	
	802.1x with Dynamic ACL Assignment	
	802.1x with Dynamic VLAN Assignment	
	802.1x and MAC Authentication on the same port	
	802.1x Authentication with IP Source Guard Protection	
	MAC Authentication with IP Source Guard Protection	
	MAC Authentication with Dynamic VLAN Assignment	
	MAC Authentication with Dynamic ACLs	
	MAC Authentication with 802.1x	
	802.1x together with Denial of Service (DoS) Attack Protection	
	Periodic Re-authentication for MAC Authentication	
	Periodic Re-authentication for 802.1x	
11	**Monitoring & Manageability**	
11.1	The Switch should support the following Monitoring & Management features;	

	RSPAN	
	NTP	
	LLDP & LLDP-MED	
	Cisco Discovery Protocol (CDP) for IPv4 and IPv6 Traffic or equivalent	
	Automation with Ansible & RESTCONF	
	DHCP Auto Configuration	
	SNMP v1, v2, and v3	
	Mirroring based on Port, IP ACL, MAC ACL and VLAN	
	Configuration Archive, Replace & Roll back	
	IP DHCP binding scalability of minimum 2K Devices	
11.2	Should support Integrated Standard based Command Line Interface (CLI), Telnet, TFTP, HTTP access to switch management/monitoring.	
11.3	Should support manageability using Network Management Software with Web based Graphical User Interface (GUI) and Cloud based Management Solutions.	
11.4	Should support NetFlow or sFlow or equivalent.	
12	**Mandatory Compliance & Warranty and support:**	
12.1	All switches, WiFi, WLC, Transceivers, AAA should be from the same OEM for better interoperability, management and support	
12.2	The Switch OS should be EAL/NDPP and ROHS6 Certified. Certificate needs to be enclosed along with the bid	
12.3	The Switch must be MTCTE Certified and TEC certificate shall be submitted	
12.4	The Switch should be quoted with Five (5) Years of TAC Support and 5 years Hardware Warranty with advance hardware replacement.	
12.5	Bidder needs to submit bid specific MAF from the OEM.	
12.6	OEM should not share land border with India. OEM needs to share declaration on the letter head for the same	
12.7	OEM should be ISO 9001:2015 certified. Certificate to be enclosed	
12.8	OEM should have 7-8 RMA depots in India for faster replacements. Details to be shared on the OEM letter head.	
12.9	The switch should have MTBF of >800K Hours at 25° C	

24Port Non PoE Access Switch		
S No.	**Specifications**	**Compliance (Yes/No)**
1	**Product details - Please specify**	
1.1	Please mention Make, Model No. and Part Code.	
2	**Architecture & Port Density**	
2.1	Access Switch should provide 24 x 10/100/1G RJ45 Ports and 4x 1G/10G/25G SFP+ Slots, for Stacking/Uplinks, from Day 1.	
	Hardware, including modules, or Software, including licenses, to support all the speeds listed above, should be available from Day 1	
2.2	Should support Virtual Switching System (VSS) or Virtual Chassis (VC) or Virtual Switching Extension (VSX) or equivalent Switch Clustering/Stacking feature, where the Switch Clustering feature should combine multiple switches into a single network element. Switch should support aggregated stacking bandwidth of 1000Gbps or more and 10 switches per stack or more.	

2.3	All type of access switches should be stackable with each other.	
3	**Performance**	
3.1	Should provide Switch Fabric Bandwidth Capacity of 248 Gbps, or more.	
3.2	Should provide Packet Forwarding Capacity of 184 Mpps, or more.	
4	**MAC Address and Route Table**	
4.1	Should support up to 32K MAC addresses, or more.	
4.2	Should support 16K IPv4 routes and 4K IPv6 routes, or more.	
5	**Physical Attributes**	
5.1	Switch should be 1U and rack mountable in standard 19" rack.	
5.2	Should support 4GB RAM, 8GB Flash and 4MB Packet buffer or better	
6	**Layer 2 features**	
6.1	Should support Jumbo Frames (up to 9K bytes).	
6.2	Should support 4K Active VLANs, with the following features;	
	Port based VLANs	
	Dual-Mode VLANs	
	MAC-based VLANs	
	Dynamic VLAN Assignment	
	Dynamic MAC-based VLAN Activation	
	Dynamic Voice VLAN Assignment	
	VLAN mapping or VLAN Translation	
6.3	Should support Spanning Tree Protocols, with the following features;	
	802.1D Spanning Tree	
	802.1W Rapid Spanning Tree Protocol (RSTP)	
	802.1s Multiple Spanning Tree	
	802.1s Multiple Spanning Tree enhancement (MSTP+)	
	Fast Port Span, Fast Uplink Span or Equivalent	
	Compatibility with PVST/PVST+, PVRST+ and PVST+ or Equivalent	
	BPDU Guard	
	Root Guard for STP & MSTP	
	Port Loop Detection	
	Spanning Tree path cost method changes	
	MSTP path-cost configuration	
6.4	Should support Link Aggregation Groups (LAG), with the following features;	
	Static LAG	
	802.3ad Link Aggregation Control Protocol (Dynamic LAG)	
	Dynamic insertion and removal of ports	
	Support for LAG between different default port speeds	
6.5	Should support 802.1q Tunneling, with the following features;	
	802.1ad (Q-in-Q) tagging	
	Q-in-Q BPDU tunneling	

	Selective Q-in-Q	
6.6	Should support Private VLANs, with the following features.	
	PVLANs with dual mode support	
	PVLAN with LAG	
6.7	Should support VLAN Registration Protocol, with the following features;	
	Multiple VLAN Registration Protocol (MVRP)	
	MVRP with Per-VLAN STP and Per-VLAN RSTP	
6.8	Should support the following features;	
	Unicast Reverse Path Forwarding (uRPF)	
	Remote Fault Notification (RFN)	
	Link Fault Signaling (LFS)	
	Uni-Directional Link Detection (UDLD) on Tagged and Untagged Ports	
	To limit Unknown Unicast Packet Flooding (UUFB)	
	Virtual Extensible LAN (VXLAN)	
7	**Layer 3 features**	
7.1	Should support the following IPv4 and IPv6 Layer 3 Routing features;	
	Routing Between Directly Connected Subnets	
	Host routes & Virtual Interfaces	
	IPv4 & IPv6 Static Routes	
	RIP v1/v2 & RIPng	
	ECMP	
	OSPF v2, OSPF v3	
	PIM-SM, PIM-SSM, PIM-DM, PIM passive	
	Policy Based Routing (PBR)	
	VRRP v2 & VRRP v3	
	Non-Stop Routing (NSR)	
	GRE IP Tunnels	
	IPv6 over IPv4 tunnels and VRF	
	DHCP Server	
	MSDP	
8	**Quality of Service (QoS) & Traffic Management**	
8.1	Should support the following Quality of Service (QoS) features;	
	ACL Mapping and Marking of ToS/DSCP (CoS)	
	ACL Mapping and Marking of 802.1p	
	ACL Mapping to Priority Queue	
	Classifying and Limiting Flows Based on TCP Flags	
	DiffServ Support	
	Honoring DSCP and 802.1p (CoS)	
	Dynamic Buffer Allocation for QoS Priorities	
	Separate QoS Queuing for Unicast and Multicast	
	Priority Queue Management using Weighted Round Robin (WRR), Strict Priority (SP), and a combination of WRR and SP	
	Priority for PFC	
8.2	Should support the following Traffic Management features;	

	ACL-based Rate Limiting	
	Traffic Policies	
	Broadcast, Multicast, and Unknown Unicast Rate Limiting	
	Inbound Rate & Outbound Rate Limiting	
	CPU Rate Limiting	
9	**Software Defined Networking (SDN)**	
9.1	Should support the following SDN features and functionality;	
	OpenFlow v1.0 & v1.3	
	Hybrid Switch Mode	
	Hybrid Port Mode	
	Support for Multiple Controllers	
10	**Security**	
10.1	Should support the following Security features;	
	Layer 3 & Layer 4 ACLs	
	Layer 2 ACLs (MAC)	
	DHCP Snooping	
	DHCP Client & Server	
	Dynamic ARP Inspection	
	Neighbor Discovery (ND) Inspection	
	Protection against Denial of Service (DoS) Attacks	
	MAC Port Security	
	RADIUS/TACACS/TACACS+	
	Secure Copy (SCP)	
	Secure Shell (SSHv2)	
	Trusted Platform Module	
	Protected Ports	
	IP Source Guard (v4 & v6)	
	IPv6 RA Guard	
	RADSEC	
10.2	The Switch should support the following Authentication features;	
	Authentication, Authorization, and Accounting (AAA)	
	802.1X Authentication and Accounting	
	MAC Authentication and Accounting	
	Web Authentication	
	802.1x with Dynamic ACL Assignment	
	802.1x with Dynamic VLAN Assignment	
	802.1x and MAC Authentication on the same port	
	802.1x Authentication with IP Source Guard Protection	
	MAC Authentication with IP Source Guard Protection	
	MAC Authentication with Dynamic VLAN Assignment	
	MAC Authentication with Dynamic ACLs	
	MAC Authentication with 802.1x	
	802.1x together with Denial of Service (DoS) Attack Protection	

	Periodic Re-authentication for MAC Authentication	
	Periodic Re-authentication for 802.1x	
11	**<u>Monitoring & Manageability</u>**	
11.1	The Switch should support the following Monitoring & Management features;	
	RSPAN	
	NTP	
	LLDP & LLDP-MED	
	Cisco Discovery Protocol (CDP) for IPv4 and IPv6 Traffic or equivalent	
	Automation with Ansible & RESTCONF	
	DHCP Auto Configuration	
	SNMP v1, v2, and v3	
	Mirroring based on Port, IP ACL, MAC ACL and VLAN	
	Configuration Archive, Replace & Roll back	
	IP DHCP binding scalability of minimum 2K Devices	
11.2	Should support Integrated Standard based Command Line Interface (CLI), Telnet, TFTP, HTTP access to switch management/monitoring.	
11.3	Should support manageability using Network Management Software with Web based Graphical User Interface (GUI) and Cloud based Management Solutions.	
11.4	Should support NetFlow or sFlow or equivalent.	
12	**<u>Mandatory Compliance & Warranty and support:</u>**	
12.1	All switches, WiFi, WLC, Transceivers, AAA should be from the same OEM for better interoperability, management, and support	
12.2	The Switch OS should be EAL/NDPP and ROHS6 Certified. Certificate needs to be enclosed along with the bid	
12.3	The Switch must be MTCTE Certified and TEC certificate shall be submitted	
12.4	The Switch should be quoted with Five (5) Years of TAC Support and 5 years Hardware Warranty with advance hardware replacement.	
12.5	Bidder needs to submit bid specific MAF from the OEM.	
12.6	OEM should not share land border with India. OEM needs to share declaration on the letter head for the same	
12.7	OEM should be ISO 9001:2015 certified. Certificate to be enclosed	
12.8	OEM should have 7-8 RMA depots in India for faster replacements. Details to be shared on the OEM letter head.	
12.9	The switch should have MTBF of >800K Hours at 25° C	

48Port Gigabit PoE Access Switch		
Sl. No	**Specifications**	**Compliance (Yes/No)**
1	**<u>Product details - Please specify</u>**	
1.1	Please mention Make, Model No. and Part Code.	
2	**<u>Architecture & Port Density</u>**	
2.1	Access Switch should provide 48 x 10/100/1G PoE+ RJ45 Ports and with minimum 740 watts of PoE power budget and 4x 1G/10G/25G SFP+ Slots, for Stacking/Uplinks, from Day 1.	
	Hardware, including modules, or Software, including licenses, to support all the speeds listed above, should be available from Day 1	

2.2	Should support Virtual Switching System (VSS) or Virtual Chassis (VC) or Virtual Switching Extension (VSX) or equivalent Switch Clustering/Stacking feature, where the Switch Clustering feature should combine multiple switches into a single network element. Switch should support aggregated stacking bandwidth of 1000Gbps or more and 10 switches per stack or more.	
2.3	All type of access switches should be stackable with each other.	
3	**Performance**	
3.1	Should provide Switch Fabric Bandwidth Capacity of 296 Gbps, or more.	
3.2	Should provide Packet Forwarding Capacity of 220 Mpps, or more.	
4	**MAC Address and Route Table**	
4.1	Should support up to 32K MAC addresses, or more.	
4.2	Should support 16K IPv4 routes and 4K IPv6 routes, or more.	
5	**Physical Attributes**	
5.1	Switch should be 1U and rack mountable in standard 19" rack.	
5.2	Should support 4GB RAM, 8GB Flash and 4MB Packet buffer or better	
6	**Layer 2 features**	
6.1	Should support Jumbo Frames (up to 9K bytes).	
6.2	Should support 4K Active VLANs, with the following features;	
	Port based VLANs	
	Dual-Mode VLANs	
	MAC-based VLANs	
	Dynamic VLAN Assignment	
	Dynamic MAC-based VLAN Activation	
	Dynamic Voice VLAN Assignment	
	VLAN mapping or VLAN Translation	
6.3	Should support Spanning Tree Protocols, with the following features;	
	802.1D Spanning Tree	
	802.1W Rapid Spanning Tree Protocol (RSTP)	
	802.1s Multiple Spanning Tree	
	802.1s Multiple Spanning Tree enhancement (MSTP+)	
	Fast Port Span, Fast Uplink Span or Equivalent	
	Compatibility with PVST/PVST+, PVRST+ and PVST+ or Equivalent	
	BPDU Guard	
	Root Guard for STP & MSTP	
	Port Loop Detection	
	Spanning Tree path cost method changes	
	MSTP path-cost configuration	
6.4	Should support Link Aggregation Groups (LAG), with the following features;	
	Static LAG	
	802.3ad Link Aggregation Control Protocol (Dynamic LAG)	
	Dynamic insertion and removal of ports	
	Support for LAG between different default port speeds	
6.5	Should support 802.1q Tunneling, with the following features;	
	802.1ad (Q-in-Q) tagging	

	Q-in-Q BPDU tunneling	
	Selective Q-in-Q	
6.6	Should support Private VLANs, with the following features.	
	PVLANs with dual mode support	
	PVLAN with LAG	
6.7	Should support VLAN Registration Protocol, with the following features;	
	Multiple VLAN Registration Protocol (MVRP)	
	MVRP with Per-VLAN STP and Per-VLAN RSTP	
6.8	Should support the following features;	
	Unicast Reverse Path Forwarding (uRPF)	
	Remote Fault Notification (RFN)	
	Link Fault Signaling (LFS)	
	Uni-Directional Link Detection (UDLD) on Tagged and Untagged Ports	
	To limit Unknown Unicast Packet Flooding (UUFB)	
	Virtual Extensible LAN (VXLAN)	
7	**Layer 3 features**	
7.1	Should support the following IPv4 and IPv6 Layer 3 Routing features;	
	Routing Between Directly Connected Subnets	
	Host routes & Virtual Interfaces	
	IPv4 & IPv6 Static Routes	
	RIP v1/v2 & RIPng	
	ECMP	
	OSPF v2, OSPF v3	
	PIM-SM, PIM-SSM, PIM-DM, PIM passive	
	Policy Based Routing (PBR)	
	VRRP v2 & VRRP v3	
	Non-Stop Routing (NSR)	
	GRE IP Tunnels	
	IPv6 over IPv4 tunnels and VRF	
	DHCP Server	
	MSDP	
8	**Quality of Service (QoS) & Traffic Management**	
8.1	Should support the following Quality of Service (QoS) features;	
	ACL Mapping and Marking of ToS/DSCP (CoS)	
	ACL Mapping and Marking of 802.1p	
	ACL Mapping to Priority Queue	
	Classifying and Limiting Flows Based on TCP Flags	
	DiffServ Support	
	Honoring DSCP and 802.1p (CoS)	
	Dynamic Buffer Allocation for QoS Priorities	
	Separate QoS Queuing for Unicast and Multicast	
	Priority Queue Management using Weighted Round Robin (WRR), Strict Priority (SP), and a combination of WRR and SP	
	Priority for PFC	

8.2	Should support the following Traffic Management features;	
	ACL-based Rate Limiting	
	Traffic Policies	
	Broadcast, Multicast, and Unknown Unicast Rate Limiting	
	Inbound Rate & Outbound Rate Limiting	
	CPU Rate Limiting	
9	**Software Defined Networking (SDN)**	
9.1	Should support the following SDN features and functionality;	
	OpenFlow v1.0 & v1.3	
	Hybrid Switch Mode	
	Hybrid Port Mode	
	Support for Multiple Controllers	
10	**Security**	
10.1	Should support the following Security features;	
	Layer 3 & Layer 4 ACLs	
	Layer 2 ACLs (MAC)	
	DHCP Snooping	
	DHCP Client & Server	
	Dynamic ARP Inspection	
	Neighbor Discovery (ND) Inspection	
	Protection against Denial of Service (DoS) Attacks	
	MAC Port Security	
	RADIUS/TACACS/TACACS+	
	Secure Copy (SCP)	
	Secure Shell (SSHv2)	
	Trusted Platform Module	
	Protected Ports	
	IP Source Guard (v4 & v6)	
	IPv6 RA Guard	
	RADSEC	
10.2	The Switch should support the following Authentication features;	
	Authentication, Authorization, and Accounting (AAA)	
	802.1X Authentication and Accounting	
	MAC Authentication and Accounting	
	Web Authentication	
	802.1x with Dynamic ACL Assignment	
	802.1x with Dynamic VLAN Assignment	
	802.1x and MAC Authentication on the same port	
	802.1x Authentication with IP Source Guard Protection	
	MAC Authentication with IP Source Guard Protection	
	MAC Authentication with Dynamic VLAN Assignment	
	MAC Authentication with Dynamic ACLs	
	MAC Authentication with 802.1x	

	802.1x together with Denial of Service (DoS) Attack Protection	
	Periodic Reauthentication for MAC Authentication	
	Periodic Reauthentication for 802.1x	
11	**Monitoring & Manageability**	
11.1	The Switch should support the following Monitoring & Management features;	
	RSPAN	
	NTP	
	LLDP & LLDP-MED	
	Cisco Discovery Protocol (CDP) for IPv4 and IPv6 Traffic or equivalent	
	Automation with Ansible & RESTCONF	
	DHCP Auto Configuration	
	SNMP v1, v2, and v3	
	Mirroring based on Port, IP ACL, MAC ACL and VLAN	
	Configuration Archive, Replace & Roll back	
	IP DHCP binding scalability of minimum 2K Devices	
11.2	Should support Integrated Standard based Command Line Interface (CLI), Telnet, TFTP, HTTP access to switch management/monitoring.	
11.3	Should support manageability using Network Management Software with Web based Graphical User Interface (GUI) and Cloud based Management Solutions.	
11.4	Should support NetFlow or sFlow or equivalent.	
12	**Mandatory Compliance & Warranty and support:**	
12.1	All switches, WiFi, WLC, Transceivers, AAA should be from the same OEM for better interoperability, management, and support	
12.2	The Switch OS should be EAL/NDPP and ROHS6 Certified. Certificate needs to be enclosed along with the bid	
12.3	The Switch must be MTCTE Certified and TEC certificate shall be submitted	
12.4	The Switch should be quoted with Five (5) Years of TAC Support and 5 years Hardware Warranty with advance hardware replacement.	
12.5	Bidder needs to submit bid specific MAF from the OEM.	
12.6	OEM should not share land border with India. OEM needs to share declaration on the letter head for the same	
12.7	OEM should be ISO 9001:2015 certified. Certificate to be enclosed	
12.8	OEM should have 7-8 RMA depots in India for faster replacements. Details to be shared on the OEM letter head.	
12.9	The switch should have MTBF of >800K Hours at 25° C	

24Port Gigabit PoE Access Switch		
Sl. No	**Specifications**	**Compliance (Yes/No)**
1	**Product details - Please specify**	
1.1	Please mention Make, Model No. and Part Code.	
2	**Architecture & Port Density**	
2.1	Access Switch should provide 24 x 10/100/1G PoE+ RJ45 Ports and with minimum 370 watts of PoE power budget and 4x 1G/10G/25G SFP+ Slots, for Stacking/Uplinks, from Day 1.	

	Hardware, including modules, or Software, including licenses, to support all the speeds listed above, should be available from Day 1	
2.2	Should support Virtual Switching System (VSS) or Virtual Chassis (VC) or Virtual Switching Extension (VSX) or equivalent Switch Clustering/Stacking feature, where the Switch Clustering feature should combine multiple switches into a single network element. Switch should support aggregated stacking bandwidth of 1000Gbps or more and 10 switches per stack or more.	
2.3	All type of access switches should be stackable with each other.	
3	**Performance**	
3.1	Should provide Switch Fabric Bandwidth Capacity of 248 Gbps, or more.	
3.2	Should provide Packet Forwarding Capacity of 184 Mpps, or more.	
4	**MAC Address and Route Table**	
4.1	Should support up to 32K MAC addresses, or more.	
4.2	Should support 16K IPv4 routes and 4K IPv6 routes, or more.	
5	**Physical Attributes**	
5.1	Switch should be 1U and rack mountable in standard 19" rack.	
5.2	Should support 4GB RAM, 8GB Flash and 4MB Packet buffer or better	
6	**Layer 2 features**	
6.1	Should support Jumbo Frames (up to 9K bytes).	
6.2	Should support 4K Active VLANs, with the following features:	
	Port based VLANs	
	Dual-Mode VLANs	
	MAC-based VLANs	
	Dynamic VLAN Assignment	
	Dynamic MAC-based VLAN Activation	
	Dynamic Voice VLAN Assignment	
	VLAN mapping or VLAN Translation	
6.3	Should support Spanning Tree Protocols, with the following features:	
	802.1D Spanning Tree	
	802.1W Rapid Spanning Tree Protocol (RSTP)	
	802.1s Multiple Spanning Tree	
	802.1s Multiple Spanning Tree enhancement (MSTP+)	
	Fast Port Span, Fast Uplink Span or Equivalent	
	Compatibility with PVST/PVST+, PVRST+ and PVST+ or Equivalent	
	BPDU Guard	
	Root Guard for STP & MSTP	
	Port Loop Detection	
	Spanning Tree path cost method changes	
	MSTP path-cost configuration	
6.4	Should support Link Aggregation Groups (LAG), with the following features;	
	Static LAG	
	802.3ad Link Aggregation Control Protocol (Dynamic LAG)	
	Dynamic insertion and removal of ports	

	Support for LAG between different default port speeds	
6.5	Should support 802.1q Tunneling, with the following features;	
	802.1ad (Q-in-Q) tagging	
	Q-in-Q BPDU tunneling	
	Selective Q-in-Q	
6.6	Should support Private VLANs, with the following features.	
	PVLANs with dual mode support	
	PVLAN with LAG	
6.7	Should support VLAN Registration Protocol, with the following features;	
	Multiple VLAN Registration Protocol (MVRP)	
	MVRP with Per-VLAN STP and Per-VLAN RSTP	
6.8	Should support the following features;	
	Unicast Reverse Path Forwarding (uRPF)	
	Remote Fault Notification (RFN)	
	Link Fault Signaling (LFS)	
	Uni-Directional Link Detection (UDLD) on Tagged and Untagged Ports	
	To limit Unknown Unicast Packet Flooding (UUFB)	
	Virtual Extensible LAN (VXLAN)	
7	**Layer 3 features**	
7.1	Should support the following IPv4 and IPv6 Layer 3 Routing features:	
	Routing Between Directly Connected Subnets	
	Host routes & Virtual Interfaces	
	IPv4 & IPv6 Static Routes	
	RIP v1/v2 & RIPng	
	ECMP	
	OSPF v2, OSPF v3	
	PIM-SM, PIM-SSM, PIM-DM, PIM passive	
	Policy Based Routing (PBR)	
	VRRP v2 & VRRP v3	
	Non-Stop Routing (NSR)	
	GRE IP Tunnels	
	IPv6 over IPv4 tunnels and VRF	
	DHCP Server	
	MSDP	
8	**Quality of Service (QoS) & Traffic Management**	
8.1	Should support the following Quality of Service (QoS) features;	
	ACL Mapping and Marking of ToS/DSCP (CoS)	
	ACL Mapping and Marking of 802.1p	
	ACL Mapping to Priority Queue	
	Classifying and Limiting Flows Based on TCP Flags	
	DiffServ Support	
	Honoring DSCP and 802.1p (CoS)	
	Dynamic Buffer Allocation for QoS Priorities	

	Separate QoS Queuing for Unicast and Multicast	
	Priority Queue Management using Weighted Round Robin (WRR), Strict Priority (SP), and a combination of WRR and SP	
	Priority for PFC	
8.2	Should support the following Traffic Management features;	
	ACL-based Rate Limiting	
	Traffic Policies	
	Broadcast, Multicast, and Unknown Unicast Rate Limiting	
	Inbound Rate & Outbound Rate Limiting	
	CPU Rate Limiting	
9	**Software Defined Networking (SDN)**	
9.1	Should support the following SDN features and functionality;	
	OpenFlow v1.0 & v1.3	
	Hybrid Switch Mode	
	Hybrid Port Mode	
	Support for Multiple Controllers	
10	**Security**	
10.1	Should support the following Security features;	
	Layer 3 & Layer 4 ACLs	
	Layer 2 ACLs (MAC)	
	DHCP Snooping	
	DHCP Client & Server	
	Dynamic ARP Inspection	
	Neighbor Discovery (ND) Inspection	
	Protection against Denial of Service (DoS) Attacks	
	MAC Port Security	
	RADIUS/TACACS/TACACS+	
	Secure Copy (SCP)	
	Secure Shell (SSHv2)	
	Trusted Platform Module	
	Protected Ports	
	IP Source Guard (v4 & v6)	
	IPv6 RA Guard	
	RADSEC	
10.2	The Switch should support the following Authentication features;	
	Authentication, Authorization, and Accounting (AAA)	
	802.1X Authentication and Accounting	
	MAC Authentication and Accounting	
	Web Authentication	
	802.1x with Dynamic ACL Assignment	
	802.1x with Dynamic VLAN Assignment	
	802.1x and MAC Authentication on the same port	
	802.1x Authentication with IP Source Guard Protection	
	MAC Authentication with IP Source Guard Protection	

	MAC Authentication with Dynamic VLAN Assignment	
	MAC Authentication with Dynamic ACLs	
	MAC Authentication with 802.1x	
	802.1x together with Denial of Service (DoS) Attack Protection	
	Periodic Reauthentication for MAC Authentication	
	Periodic Reauthentication for 802.1x	
11	**Monitoring & Manageability**	
11.1	The Switch should support the following Monitoring & Management features;	
	RSPAN	
	NTP	
	LLDP & LLDP-MED	
	Cisco Discovery Protocol (CDP) for IPv4 and IPv6 Traffic or equivalent	
	Automation with Ansible & RESTCONF	
	DHCP Auto Configuration	
	SNMP v1, v2, and v3	
	Mirroring based on Port, IP ACL, MAC ACL and VLAN	
	Configuration Archive, Replace & Roll back	
	IP DHCP binding scalability of minimum 2K Devices	
11.2	Should support Integrated Standard based Command Line Interface (CLI), Telnet, TFTP, HTTP access to switch management/monitoring.	
11.3	Should support manageability using Network Management Software with Web based Graphical User Interface (GUI) and Cloud based Management Solutions.	
11.4	Should support NetFlow or sFlow or equivalent.	
12	**Mandatory Compliance & Warranty and support:**	
12.1	Should support Virtual Switching System (VSS) or Virtual Chassis (VC) or Virtual Switching Extension (VSX) or equivalent Switch Clustering/Stacking feature, where the Switch Clustering feature should combine multiple switches into a single network element. Switch should support aggregated stacking bandwidth of 1000Gbps or more and 10 switches per stack or more.	
12.2	The Switch OS should be EAL/NDPP and ROHS6 Certified. Certificate needs to be enclosed along with the bid	
12.3	The Switch must be MTCTE Certified and TEC certificate shall be submitted	
12.4	The Switch should be quoted with Five (5) Years of TAC Support and 5 years Hardware Warranty with advance hardware replacement.	
12.5	Bidder needs to submit bid specific MAF from the OEM.	
12.6	OEM should not share land border with India. OEM needs to share declaration on the letter head for the same	
12.7	OEM should be ISO 9001:2015 certified. Certificate to be enclosed	
12.8	OEM should have 7-8 RMA depots in India for faster replacements. Details to be shared on the OEM letter head.	
12.9	The switch should have MTBF of >800K Hours at 25° C	

24Port Multigigabit PoE Access Switch		
Sl. No	**Specifications**	**Compliance (Yes/No)**
1	**Product details - Please specify**	
1.1	Please mention Make, Model No. and Part Code.	
2	**Architecture & Port Density**	
2.1	Access Switch should provide 24 x 10/100/1G/2.5Gbps PoE+ RJ45 Ports and with minimum 740 watts of PoE power budget and 4x 1G/10G/25G SFP+ Slots, for Stacking/Uplinks, from Day 1.	
	Hardware, including modules, or Software, including licenses, to support all the speeds listed above, should be available from Day 1	
2.2	Should support Virtual Switching System (VSS) or Virtual Chassis (VC) or Virtual Switching Extension (VSX) or equivalent Switch Clustering/Stacking feature, where the Switch Clustering feature should combine multiple switches into a single network element. Switch should support aggregated stacking bandwidth of 1000Gbps or more and 10 switches per stack or more.	
2.3	All type of access switches should be stackable with each other .	
3	**Performance**	
3.1	Should provide Switch Fabric Bandwidth Capacity of 320 Gbps, or more.	
3.2	Should provide Packet Forwarding Capacity of 237 Mpps, or more.	
4	**MAC Address and Route Table**	
4.1	Should support up to 32K MAC addresses, or more.	
4.2	Should support 16K IPv4 routes and 4K IPv6 routes, or more.	
5	**Physical Attributes**	
5.1	Switch should be 1U and rack mountable in standard 19" rack.	
5.2	Should support 4GB RAM, 8GB Flash and 4MB Packet buffer or better	
6	**Layer 2 features**	
6.1	Should support Jumbo Frames (up to 9K bytes).	
6.2	Should support 4K Active VLANs, with the following features;	
	Port based VLANs	
	Dual-Mode VLANs	
	MAC-based VLANs	
	Dynamic VLAN Assignment	
	Dynamic MAC-based VLAN Activation	
	Dynamic Voice VLAN Assignment	
	VLAN mapping or VLAN Translation	
6.3	Should support Spanning Tree Protocols, with the following features;	
	802.1D Spanning Tree	
	802.1W Rapid Spanning Tree Protocol (RSTP)	
	802.1s Multiple Spanning Tree	
	802.1s Multiple Spanning Tree enhancement (MSTP+)	
	Fast Port Span, Fast Uplink Span or Equivalent	
	Compatibility with PVST/PVST+, PVRST+ and PVST+ or Equivalent	

	BPDU Guard	
	Root Guard for STP & MSTP	
	Port Loop Detection	
	Spanning Tree path cost method changes	
	MSTP path-cost configuration	
6.4	Should support Link Aggregation Groups (LAG), with the following features;	
	Static LAG	
	802.3ad Link Aggregation Control Protocol (Dynamic LAG)	
	Dynamic insertion and removal of ports	
	Support for LAG between different default port speeds	
6.5	Should support 802.1q Tunneling, with the following features;	
	802.1ad (Q-in-Q) tagging	
	Q-in-Q BPDU tunneling	
	Selective Q-in-Q	
6.6	Should support Private VLANs, with the following features.	
	PVLANs with dual mode support	
	PVLAN with LAG	
6.7	Should support VLAN Registration Protocol, with the following features;	
	Multiple VLAN Registration Protocol (MVRP)	
	MVRP with Per-VLAN STP and Per-VLAN RSTP	
6.8	Should support the following features;	
	Unicast Reverse Path Forwarding (uRPF)	
	Remote Fault Notification (RFN)	
	Link Fault Signaling (LFS)	
	Uni-Directional Link Detection (UDLD) on Tagged and Untagged Ports	
	To limit Unknown Unicast Packet Flooding (UUFB)	
	Virtual Extensible LAN (VXLAN)	
7	**Layer 3 features**	
7.1	Should support the following IPv4 and IPv6 Layer 3 Routing features;	
	Routing Between Directly Connected Subnets	
	Host routes & Virtual Interfaces	
	IPv4 & IPv6 Static Routes	
	RIP v1/v2 & RIPng	
	ECMP	
	OSPF v2, OSPF v3	
	PIM-SM, PIM-SSM, PIM-DM, PIM passive	
	Policy Based Routing (PBR)	
	VRRP v2 & VRRP v3	
	Non-Stop Routing (NSR)	
	GRE IP Tunnels	
	IPv6 over IPv4 tunnels and VRF	
	DHCP Server	
	MSDP	

8	**<u>Quality of Service (QoS) & Traffic Management</u>**	
8.1	Should support the following Quality of Service (QoS) features;	
	ACL Mapping and Marking of ToS/DSCP (CoS)	
	ACL Mapping and Marking of 802.1p	
	ACL Mapping to Priority Queue	
	Classifying and Limiting Flows Based on TCP Flags	
	DiffServ Support	
	Honoring DSCP and 802.1p (CoS)	
	Dynamic Buffer Allocation for QoS Priorities	
	Separate QoS Queuing for Unicast and Multicast	
	Priority Queue Management using Weighted Round Robin (WRR), Strict Priority (SP), and a combination of WRR and SP	
	Priority for PFC	
8.2	Should support the following Traffic Management features;	
	ACL-based Rate Limiting	
	Traffic Policies	
	Broadcast, Multicast, and Unknown Unicast Rate Limiting	
	Inbound Rate & Outbound Rate Limiting	
	CPU Rate Limiting	
9	**<u>Software Defined Networking (SDN)</u>**	
9.1	Should support the following SDN features and functionality;	
	OpenFlow v1.0 & v1.3	
	Hybrid Switch Mode	
	Hybrid Port Mode	
	Support for Multiple Controllers	
10	**<u>Security</u>**	
10.1	Should support the following Security features;	
	Layer 3 & Layer 4 ACLs	
	Layer 2 ACLs (MAC)	
	DHCP Snooping	
	DHCP Client & Server	
	Dynamic ARP Inspection	
	Neighbor Discovery (ND) Inspection	
	Protection against Denial of Service (DoS) Attacks	
	MAC Port Security	
	RADIUS/TACACS/TACACS+	
	Secure Copy (SCP)	
	Secure Shell (SSHv2)	
	Trusted Platform Module	
	Protected Ports	
	IP Source Guard (v4 & v6)	
	IPv6 RA Guard	
	RADSEC	
10.2	The Switch should support the following Authentication features;	

	Authentication, Authorization, and Accounting (AAA)	
	802.1X Authentication and Accounting	
	MAC Authentication and Accounting	
	Web Authentication	
	802.1x with Dynamic ACL Assignment	
	802.1x with Dynamic VLAN Assignment	
	802.1x and MAC Authentication on the same port	
	802.1x Authentication with IP Source Guard Protection	
	MAC Authentication with IP Source Guard Protection	
	MAC Authentication with Dynamic VLAN Assignment	
	MAC Authentication with Dynamic ACLs	
	MAC Authentication with 802.1x	
	802.1x together with Denial of Service (DoS) Attack Protection	
	Periodic Reauthentication for MAC Authentication	
	Periodic Reauthentication for 802.1x	
11	**Monitoring & Manageability**	
11.1	The Switch should support the following Monitoring & Management features;	
	RSPAN	
	NTP	
	LLDP & LLDP-MED	
	Cisco Discovery Protocol (CDP) for IPv4 and IPv6 Traffic or equivalent	
	Automation with Ansible & RESTCONF	
	DHCP Auto Configuration	
	SNMP v1, v2, and v3	
	Mirroring based on Port, IP ACL, MAC ACL and VLAN	
	Configuration Archive, Replace & Roll back	
	IP DHCP binding scalability of minimum 2K Devices	
11.2	Should support Integrated Standard based Command Line Interface (CLI), Telnet, TFTP, HTTP access to switch management/monitoring.	
11.3	Should support manageability using Network Management Software with Web based Graphical User Interface (GUI) and Cloud based Management Solutions.	
11.4	Should support NetFlow or sFlow or equivalent.	
12	**Mandatory Compliance & Warranty and support:**	
12.1	All switches, WiFi, WLC, Transceivers, AAA should be from the same OEM for better interoperability, management, and support	
12.2	The Switch OS should be EAL/NDPP and ROHS6 Certified. Certificate needs to be enclosed along with the bid	
12.3	The Switch must be MTCTE Certified and TEC certificate shall be submitted	
12.4	The Switch should be quoted with Five (5) Years of TAC Support and 5 years Hardware Warranty with advance hardware replacement.	
12.5	Bidder needs to submit bid specific MAF from the OEM.	
12.6	OEM should not share land border with India. OEM needs to share declaration on the letter head for the same	
12.7	OEM should be ISO 9001:2015 certified. Certificate to be enclosed	

12.8	OEM should have 7-8 RMA depots in India for faster replacements. Details to be shared on the OEM letter head.	
12.9	The switch should have MTBF of >500K Hours at 25° C	

8Port Multigigabit PoE Access Switch		
Sl. No	**Specifications**	**Compliance (Yes/No)**
1	**Product details - Please specify**	
1.1	Please mention Make, Model No. and Part Code.	
2	**Architecture & Port Density**	
2.1	Access Switch should provide 4 x 100/1G/2.5Gbps PoE+ RJ45 Ports, 4 x 100/1/2.5/5/10Gbps and 2 x 1/10/25Gbps SFP28 ports for Stacking/Uplinks. Switch should have minimum 240 watts of PoE power budget from Day 1.	
	Hardware, including modules, or Software, including licenses, to support all the speeds listed above, should be available from Day 1	
2.2	Should support Virtual Switching System (VSS) or Virtual Chassis (VC) or Virtual Switching Extension (VSX) or equivalent Switch Clustering/Stacking feature, where the Switch Clustering feature should combine multiple switches into a single network element. Switch should support stacking of 10 switches per stack or more.	
2.3	All type of access switches should be stackable with each other.	
3	**Performance**	
3.1	Should provide Switch Fabric Bandwidth Capacity of 200 Gbps, or more.	
3.2	Should provide Packet Forwarding Capacity of 148 Mpps, or more.	
4	**MAC Address and Route Table**	
4.1	Should support up to 32K MAC addresses, or more.	
4.2	Should support 16K IPv4 routes and 4K IPv6 routes, or more.	
5	**Physical Attributes**	
5.1	Switch should be 1U and rack mountable in standard 19" rack.	
5.2	Should support 4GB RAM, 8GB Flash and 4MB Packet buffer or better	
6	**Layer 2 features**	
6.1	Should support Jumbo Frames (up to 9K bytes).	
6.2	Should support 4K Active VLANs, with the following features:	
	Port based VLANs	
	Dual-Mode VLANs	
	MAC-based VLANs	
	Dynamic VLAN Assignment	
	Dynamic MAC-based VLAN Activation	
	Dynamic Voice VLAN Assignment	
	VLAN mapping or VLAN Translation	
6.3	Should support Spanning Tree Protocols, with the following features;	
	802.1D Spanning Tree	
	802.1W Rapid Spanning Tree Protocol (RSTP)	

	802.1s Multiple Spanning Tree	
	802.1s Multiple Spanning Tree enhancement (MSTP+)	
	Fast Port Span, Fast Uplink Span or Equivalent	
	Compatibility with PVST/PVST+, PVRST+ and PVST+ or Equivalent	
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	Root Guard for STP & MSTP	
	Port Loop Detection	
	Spanning Tree path cost method changes	
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	Support for LAG between different default port speeds	
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	802.1ad (Q-in-Q) tagging	
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	Selective Q-in-Q	
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	PVLAN with LAG	
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	Unicast Reverse Path Forwarding (uRPF)	
	Remote Fault Notification (RFN)	
	Link Fault Signaling (LFS)	
	Uni-Directional Link Detection (UDLD) on Tagged and Untagged Ports	
	To limit Unknown Unicast Packet Flooding (UUFB)	
	Virtual Extensible LAN (VXLAN)	
7	**Layer 3 features**	
7.1	Should support the following IPv4 and IPv6 Layer 3 Routing features;	
	Routing Between Directly Connected Subnets	
	Host routes & Virtual Interfaces	
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	RIP v1/v2 & RIPng	
	ECMP	
	OSPF v2, OSPF v3	
	PIM-SM, PIM-SSM, PIM-DM, PIM passive	
	Policy Based Routing (PBR)	
	VRRP v2 & VRRP v3	
	Non-Stop Routing (NSR)	

	GRE IP Tunnels	
	IPv6 over IPv4 tunnels and VRF	
	DHCP Server	
	MSDP	
8	**Quality of Service (QoS) & Traffic Management**	
8.1	Should support the following Quality of Service (QoS) features;	
	ACL Mapping and Marking of ToS/DSCP (CoS)	
	ACL Mapping and Marking of 802.1p	
	ACL Mapping to Priority Queue	
	Classifying and Limiting Flows Based on TCP Flags	
	DiffServ Support	
	Honoring DSCP and 802.1p (CoS)	
	Dynamic Buffer Allocation for QoS Priorities	
	Separate QoS Queuing for Unicast and Multicast	
	Priority Queue Management using Weighted Round Robin (WRR), Strict Priority (SP), and a combination of WRR and SP	
	Priority for PFC	
8.2	Should support the following Traffic Management features;	
	ACL-based Rate Limiting	
	Traffic Policies	
	Broadcast, Multicast, and Unknown Unicast Rate Limiting	
	Inbound Rate & Outbound Rate Limiting	
	CPU Rate Limiting	
9	**Software Defined Networking (SDN)**	
9.1	Should support the following SDN features and functionality;	
	OpenFlow v1.0 & v1.3	
	Hybrid Switch Mode	
	Hybrid Port Mode	
	Support for Multiple Controllers	
10	**Security**	
10.1	Should support the following Security features;	
	Layer 3 & Layer 4 ACLs	
	Layer 2 ACLs (MAC)	
	DHCP Snooping	
	DHCP Client & Server	
	Dynamic ARP Inspection	
	Neighbor Discovery (ND) Inspection	
	Protection against Denial of Service (DoS) Attacks	
	MAC Port Security	
	RADIUS/TACACS/TACACS+	
	Secure Copy (SCP)	
	Secure Shell (SSHv2)	
	Trusted Platform Module	
	Protected Ports	

	IP Source Guard (v4 & v6)	
	- IPv6 RA Guard	
	- RADSEC	
10.2	The Switch should support the following Authentication features;	
	Authentication, Authorization, and Accounting (AAA)	
	802.1X Authentication and Accounting	
	MAC Authentication and Accounting	
	Web Authentication	
	802.1x with Dynamic ACL Assignment	
	802.1x with Dynamic VLAN Assignment	
	802.1x and MAC Authentication on the same port	
	802.1x Authentication with IP Source Guard Protection	
	MAC Authentication with IP Source Guard Protection	
	MAC Authentication with Dynamic VLAN Assignment	
	MAC Authentication with Dynamic ACLs	
	MAC Authentication with 802.1x	
	802.1x together with Denial of Service (DoS) Attack Protection	
	Periodic Reauthentication for MAC Authentication	
	Periodic Reauthentication for 802.1x	
10.3	The Switch should support Cisco ISE/Aruba ClearPass/other Authentication solutions	
11	**Monitoring & Manageability**	
11.1	The Switch should support the following Monitoring & Management features;	
	RSPAN	
	NTP	
	LLDP & LLDP-MED	
	Cisco Discovery Protocol (CDP) for IPv4 and IPv6 Traffic or equivalent	
	Automation with Ansible & RESTCONF	
	DHCP Auto Configuration	
	SNMP v1, v2, and v3	
	Mirroring based on Port, IP ACL, MAC ACL and VLAN	
	Configuration Archive, Replace & Roll back	
	IP DHCP binding scalability of minimum 2K Devices	
11.2	Should support Integrated Standard based Command Line Interface (CLI), Telnet, TFTP, HTTP access to switch management/monitoring.	
11.3	Should support manageability using Network Management Software with Web based Graphical User Interface (GUI) and Cloud based Management Solutions.	
11.4	Should support NetFlow or sFlow or equivalent.	
12	**Mandatory Compliance & Warranty and support:**	
12.1	All switches, WiFi, WLC, Transceivers, AAA should be from the same OEM for better interoperability, management and support	
12.2	The Switch OS should be EAL/NDPP and ROHS6 Certified. Certificate needs to be enclosed along with the bid	
12.3	The Switch must be MTCTE Certified and TEC certificate shall be submitted	

12.4	The Switch should be quoted with Five (5) Years of TAC Support and 5 years Hardware Warranty with advance hardware replacement.	
12.5	Bidder needs to submit bid specific MAF from the OEM.	
12.6	OEM should not share land border with India. OEM needs to share declaration on the letter head for the same	
12.7	OEM should be ISO 9001:2015 certified. Certificate to be enclosed	
12.8	OEM should have 7-8 RMA depots in India for faster replacements. Details to be shared on the OEM letter head.	
12.9	The switch should have MTBF of >500K Hours at 25° C	

10G SFP+ SR Optics (300 Meters)		
S. No.	**Specifications**	**Compliance (Yes/No)**
1	SFP should support multi-Mode Fiber 850nm.	
2	SFP should support OM3 Multi-Mode Fiber Cable	
3	SFP should be 802.3ae compliant and shall support a distance up to 300 Meters	
4	SFP should have LC Connector	
5	SFP should be protocol independent & Hot-Swappable	
6	SFP should be MSA, ROHS 5 & 6 Compliant	
7	SFP should support Digital Optical Monitoring	
8	SFP should support operating temperature from (0^0 C to 70^0C)	

10G SFP+ LR Optics (10 KM)		
SN	**Specifications**	**Compliance (Yes/No)**
1	SFP should support Single-Mode Fiber 1310nm.	
2	SFP should support Single-Mode Fiber Cable	
3	SFP should be 802.3ae compliant and shall support a distance up to 10 Kilometers	
4	SFP should have LC Connector	
5	SFP should be protocol independent & Hot-Swappable	
6	SFP should be MSA, ROHS 5 & 6 Compliant	
7	SFP should support Digital Optical Monitoring	
8	SFP should support operating temperature from (0^0 C to 70^0C)	

Wireless Controller		
S. No.	**Specification**	**Compliance (Yes/No)**
1	Wireless Controller should be tested for EAL 2/NDPP or above under Common Criteria Certification . Certificate must be submitted.	

2	Wireless Controller should be MTCTE (Mandatory Testing & Certification of Telecommunication Equipment) Certified and Certificate issued by TEC (Telecommunication Engineering Center), Department of Telecommunications must be submitted.	
3	Wireless Controller should be quoted with 05 years of TAC Support & 5 years Hardware Warranty with advance hardware replacement	
4	Wireless Controller should support operating temperature from 0^0 to 40^0 degree Celsius.	
5	Wireless Controller should have minimum of 4 x 1Gigabit Ethernet & 4 x 10Gigabit Ports or more. 4x10G Multimode SFP+ transceivers to be supplied with the controller	
6	Wireless Controller should support 1+1 Internal Redundant Power Supply.	
7	Controller should be able to manage the required number of APs on a single appliance from day one and should be scalable up to 2000 AP on single appliance and 6000 AP in a clustered configuration. Cloud Based solution will not be accepted. The controller or the solution should be able to monitor and manage the required number of switches.	
8	Support for N:1 redundancy for controller. In case primary controller goes down all features should be supported by redundant controller. Software/ Cloud Based Controller Solution will not be accepted.	
9	Each Controller or its cluster should have capacity to handle 40,000 or more Concurrent devices.	
10	Redundancy Features: WLC must support Active: Active with N+1 redundancy.	
11	Controller should support minimum 2000 WLAN's.	
12	The proposed WLAN solution must support a distributed forwarding/local breakout architecture in which only client authentication is tunneled to the centralized controller; all client data traffic is forwarded directly on towards its destination via the client's default gateway. Further: a.Specify any loss of functionality, caveats or loss of capacity/performance is exhibited by the solution in this distributed forwarding mode. b.On a per WLAN (SSID) basis there must be an option to tunnel traffic to the controller either unencrypted or encrypted format	
13	Controller should provide air-time fairness between the different speed clients – slower clients should not be starved by the faster clients and faster clients should not adversely affected by slower clients.	
14	Controller should have the Ability to map SSID to VLAN and dynamic VLAN support for same SSID.	
15	Controller should support automatic channel selection for interference avoidance.	
16	Controller should support external Captive Portal Integration - Web-services based API for external web-portals to integrate with the controller	
17	Controller should have the capability to limit/prevent clients from using static IP addresses thereby enhancing network efficiency and preventing network conflicts.	
18	The controller or WLAN solution should support client troubleshooting feature that allows an administrator to focus on a specific client device and its connectivity status. The tool should track the step-by-step progress of the client's connection, through 802.11 stages, RADIUS, EAP authentication, captive portal redirects, encryption key setup, DHCP, roaming, and more (depending on WLAN type).	
19	For troubleshooting purpose, the administrator of the controller must have the ability to remotely capture 802.11 and/or 802.3 frames from an access point without disrupting client access.	

20	In order to have good visibility on the utilization of an AP, the controller or proposed solution should be able to provide the following statistics for each AP: a. List of all the SSIDs deployed on each of the radio of the AP. b. Number of client devices associated on each radio c. Average client RSSI. d. Data sent/received e. Air Time utilization (%RX, %TX, %Busy) f. Statistics on retransmitted packets g. Graphical collation of various trend and troubleshooting data such as estimated channel capacity, current channel utilization, number of associated clients, RF pollution, other APs detected	
21	The controller or proposed solution should support Role-based Access Controls that can provide policy controls on a single SSID such as: a.Time of day access b.VLAN assignment c.Per device rate limiting d.Deny/Allow specified device OS types	
22	The controller should support in built spectrum analysis feature.	
23	The controller should support the ability to create different zones in which AP can be grouped logically or physically based on location for example different buildings of a campus can be configured as different zones so that each zone will have different configuration and policies.	
24	The controller should support Hotspot 2.0 (pass point).	
25	Access points can discover controllers on the same L2 domain without requiring any configuration on the access point.	
26	Access points can discover controllers across Layer-3 network through DHCP or DNS option	
27	WIRELESS SECURITY & Authentication: Open, 802.1x/EAP, PSK, WISPr, WPA, WPA2-AES. Fast EAP-SIM re-authentication. EAP-SIM, EAP-AKA, EAP-AKA over WLAN for 802.1X Wi-Fi. It should also support WPA3 and Enhanced Open	
28	**To aid to physically locating rogue devices in conjunction with scanning at the APs the controller should be able to list/classify detected Rogue Devices. Further:** a) The information presented must include information about the detecting AP(s) and the rogues signal strength relative to them. It should display rogues on a map b) The controller should be able to send a filtered notification to the administrator when a rogue device has been detected c) Neighboring APs should be capable of de-authenticating clients from a malicious rogue device i.e. one which is spoofing the BSSID or SSID of a genuine managed AP. d) The controller or proposed solution should support rogue classification policy. The policy should support rules for Ad Hoc Networks, Clear to Send (CTS) Abuse, De-Authentication Flood, Disassociation Flood, Request to Send (RTS) Abuse, Excessive Power, MAC (BSSID) Spoofing, Same Network, NULL SSID and SSID Spoofing. e) The WLAN or proposed solution should support Known, Ignore, Malicious and Rogue as part of WIPS classification types.	
29	WLC Should support L2 Client Isolation so User cannot access each other's devices. Isolation should have option to apply on AP or SSID's.	
30	Support for Walled Garden "Walled Garden" functionality to allow restricted access to select destinations by unauthorized wireless users.	
31	The proposed architecture should be based on controller-based Architecture with thick AP deployment. While Encryption / decryption of 802.11 packets should be able to perform at the AP.	

32	The controller should provide a captive portal to authenticate Guest users that are not part of the organization via a Guest pass key. Further the solution must provide:	
	a. Provide a web-based application that allows non-technical staff to create Guest passes that are valid for a time limited duration	
	b. Allow the IT Administrator to view and delete individual Guest passes	
	c. Allow for batch generation of Guest passes	
	d. Provide customizable Guest portal and guest pass instructions.	
33	The controller or overall solution must also support Self registration of Guests.	
34	The controller must be capable of identifying device host OS type and the host name. Further the solution must be able to utilize the host OS information to provide per WLAN policy based access such as allow/deny access, rate limit and assign to VLAN	
35	When Wireless Mesh is enabled, the controller should be able to show the mesh topology on floor plans in a graphical format.	
36	The Wireless Mesh should support self-healing whereby if Root AP goes down then the Mesh AP should be able to automatically find and connect to another Root AP	
37	WLC should be able to present a customizable dashboard with information on the status of the WLAN network.	
38	The WLAN solution should support import of floor plans for indoor AP.	
39	WLC should be able to raise critical alarms by sending an email. The email client on the controller should support SMTP outbound authentication and TLS encryption.	
40	The controller or its integrated solution must support APIs for easier management and integration with existing network management devices. Provide the list of APIs supported.	
41	WLC or integrated solution should provide customized reporting of historical WLAN information.	
42	Controller should support Filtering of Alarms and event Log based on APs, SSID or Zones	
43	Controller should support Syslog support towards external syslog server	
44	Controller should support per SSID or dynamic Per user bandwidth Rate Limiting	
45	Controller should support Self-healing (on detection of RF interference or loss of RF coverage) and vendor should provide their Interference mitigation techniques.	
46	System must support Band Steering where 5 Ghz clients are forced to connect over 5Ghz Radio to provide better load balancing among 2.4Ghz and 5Ghz Radios.	
47	WLC shall support Quality of Service features like 802.11e based QoS enhancements, WMM or equivalent and U-APSD to provide best performance on Video applications.	
48	The controller should provide Application recognition to allow the administrator to gain insight on the applications in use and the bandwidth they consume per system and per user.	
49	The Controller or WLAN solution should support Wired network (Network Switch) & Wireless Access Point (Indoor & Outdoor) management from single management interface.	
50	The Controller or WLAN solution should support switch registration and authentication	
51	The Controller or WLAN solution should support Switch inventory (model, FW version, last backup, etc)	
52	The Controller or WLAN solution should support Health and performance monitoring (status, traffic stats, errors, clients etc) with alarms	
53	The Controller or WLAN solution should support switch Firmware Upgrade	
54	The Controller or WLAN solution should support Switch configuration file backup and restore	

55	The Controller or WLAN solution should support Client troubleshooting - search by Client MAC to find the AP/switch port for that client	
56	Bidder needs to submit bid specific MAF from the OEM.	
57	OEM End-of-sale declaration shall not have been released for the quoted model at the time of the bid submission.	
58	Wireless Controller shall conform to TEC EMI EMC Standard EN/IEC 60950-1, EN 55022, EN 61000-3-2, EN61000-3-3. TEC certificate shall be submitted	
59	Wireless Controller should be capable to integrate with Cloud Based Network Analystics Engine to provide Wireless Performance Insights, KPIs and what are the applications (Top N apps) that are consuming the most network bandwidth, monitors application traffic arriving from users (Top N talkers)	
60	All switches, WiFi, WLC, Transceivers, AAA should be from the same OEM for better interoperability, management, and support	

WiFi6 Indoor WiFi Access Point		
S. No	**Specification**	**Compliance (Yes/No)**
	General Features	
1	Access Point should be tested for EAL 2/NDPP or above under Common Criteria Certification or Certificate issued by Indian Common Criteria Certification Scheme (IC3S) Certificate must be submitted.	
2	Access Point should be MTCTE (Mandatory Testing & Certification of Telecommunication Equipment) Certified and Certificate issued by TEC (Telecommunication Engineering Center), Department of Telecommunications must be submitted.	
3	Access Point should have been approved by Wireless Planning Commission (TRAI, Govt. of India), ETA Certificate must be submitted.	
4	Access Point must be Wi-Fi Alliance Certified to ensure the interoperability with other make client devices.	
5	Access Point should be quoted with 05 years of TAC Support & 5 years for Hardware Warranty.	
6	Access Point should support operating temperature from 0^0 to 50^0 degree Celsius.	
	Radio Specifications	
7	Access Point should be dual-band, dual-radio indoor access point which should support six spatial streams 4x4:4 SU/MU-MIMO on 5GHz and 2x2:2 SU/MU-MIMO on 2.4GHz.	
8	Access Point should support IEEE 802.11 a/b/g/n/ac/ax standards.	
9	Access Point should support total data rates of 2974 Mbps (5Ghz: 2400Mbps & 2.4Ghz: 574 Mbps)	
10	Access Point should support Channelization at 20 Mhz, 40Mhz, 80 Mhz, 160/ 80+80Mhz	
11	Access Point should provide 26dBm transmit power on both radios as per TRAI-WPC Regulatory Norms. Access Point should have -96dBm or lower receive sensitivity.	
12	Access Point should have adaptive antenna technology for performance optimization and interference mitigation features. Access Point should provide better coverage and performance utilizing multi-directional antenna patterns and polarization with maximal ratio combining.	

13	Access Point should direct the radio signals per-device on a packet-by-packet in real time to support high device density environments. Antenna should operate without the need for device feedback to support devices using legacy standards.	
	Interface & Power Requirements	
14	Access Point PoE port should have 1 x 2.5Gbps PoE+ and 1 x 1Gbps Ethernet Port and 1 x USB Port	
	Networking Requirements	
15	Access Point should have capacity to handle minimum 500 concurrent devices.	
16	Access Point should support minimum 30 SSID or more.	
17	Access Point should have built-in for BLE and Zigbee for IoT integration	
18	Access Point should have built-in diagnostics tools such as Spectrum Analyzer to analyze the RF Channel for Interference & Client speed test etc.	
19	Access Point should support Airtime Fairness, Client Load Balancing, Airtime Based WLAN Prioritization.	
20	Access Point should be flexible hardware to be deployed as Standalone, Controller less (Cluster), Controller Based (Hardware or Software), Cloud Based Controller without changing the Hardware.	
21	Access Point should support Dual Stack (IPv4 & IPv6), IEEE 802.1Q, Band Balancing, QoS, Layer 2/3 & 4 Access Control List.	
22	Access Point should be able to act as WIPS Sensor, Location Analytics Engine & Network Analytics Engine.	
23	Access Point should support Flex connect or Site-Survivability, in case the controller goes down the Access Point must be able to handle the client traffic without any disruption.	
	Security & Monitoring	
24	Access Point should support AES Encrypted GRE Based Tunnel for Data Forwarding.	
25	Access Point should support auth/encryption methods for WLAN configuration: WPA-2 AES, PSK, WPA3, WPA2/WPA3 Mix, OWE. It should support Role Based Access Control, Rate-Limiting, Device Fingerprinting and 802.11r Fast Roaming.	
26	Access Point should support WMM Power Save, Tx Beamforming, LDPC, STBC, 802.11r/k/v, Hotspot 2.0, Captive Portal and WISPr.	
	Management Features	
27	Access Point should have administration access through HTTPS GUI, SSH & CLI. It should provide WLAN Configuration for standalone operation and provisioning tools for controller/ cloud operations. If controller dis-allows GUI/CLI access it should follow the same policy/ rule.	
28	Access Point should have recovery SSID for easy access to Console (CLI) when the AP is unreachable through network.	
	Certification	
29	Access Point shall conform to UL-2043 Plenum, EN 62311 Human Safety/ RF Exposure, WEEE & ROHS Standard.	
30	Access Point shall conform to TEC EMI EMC Standard EN/IEC 61000-4-2, EN61000-4-3, EN61000-4-5.	
31	All Switches, Optical Transceivers, Wireless Controller and Wireless Access Point should be from the same OEM for better interoperability, ease of administration and ease of technical support.	

WiFi6 Outdoor WiFi Access Point		
S. No.	**Specifications**	**Compliance (Yes/No)**
1	The APs should support IEEE 802/11a/b/g/n/ac/ax standards with Dual Band Concurrent 2x2:2 streams (2.4GHz) + 2x2:2 streams (5GHz)	
2	The proposed access point should be 802.11ax (Wi-Fi 6) and Operate in dual band radio.	
3	The AP Should supports on both bands for the capacity of 2.4GHz 802.11b/g/n/ac/ax 574 Mbps and 5 GHz 802.11b/g/n/ac/ax 1200 Mbps	
4	The AP shall have 1 ports, auto MDX, auto-sensing 10/100/1000 Mbps, RJ-45 port	
5	The access point should be capable to be managed as standalone or through Hardware/virtual controller/Cloud based controller or it should work as a controller based on the site requirement.	
6	The Outdoor AP should support 40 MHz channelization on 2.4GHz and 20/40/80 MHz channelization on 5 GHz. It should also support MU-MIMO.	
7	The access point should be able to operate in full MIMO mode with 802.3af/at POE.	
8	Antenna should dynamically choose antenna patterns in real-time environment to establish the best possible connection with every device. Should support at least 64 antenna patterns combinations.	
9	AP should have adaptive antenna technology for performance optimization and interference mitigation features. Antenna should provide better coverage and performance utilizing multi-directional antenna patterns and polarization diversity with maximal ratio combining.	
10	Since the WLAN network will be using an unlicensed band, the solution should have mechanisms that reduce the impact of interference generated by other radio equipment operating in the same band. Please Describe techniques supported.	
11	The access point should be able to detect clients that have dual band capability and automatically steer those clients to use the 5GHz band instead of the 2.4GHz band.	
12	The antennas to be dual polarized and should be integrated inside the access point enclosure to minimize damage and create a low-profile unit that does not stand out visually. The antennas could be omnidirectional or directional as per the requirement or site survey done by the vendor.	
13	The access point should support 802.1q VLAN tagging	
14	The access point should support WPA2/3 enterprise authentication. AP should support Authentication via 802.1X and Active Directory.	
15	Implement Wi-Fi alliance standards WMM, 802.11d, 802.11h and 802.11e	
16	The Access Point should provide for concurrent support for high-definition IP Video, Voice and Data application without needing any configuration change. This feature should be demonstrable.	
17	Channel selection based on measuring throughput capacity in real time and switching to another channel should the capacity fall below the statistical average of all channels without using background scanning as a method.	
18	Should support Transmit power tuning in 1dB increments to reduce interference and RF hazards	
19	Device antenna gain (integrated) must be at least 3dBi.	
20	AP should support AES encrypted GRE-based tunnel for data forwarding.	
21	AP Should support auth/encryption methods for WLAN configuration: Open, WEP, WPA2-AES, PSK, WPA3-SAE, WPA3-OWE, IEEE 802.1X/EAP, AAA, AES-GCMP-256.It	

	should also support Role-Based Access Control, rate-limiting, device fingerprinting, 802.11w MFP and 802.11r Fast roaming.	
22	Should support 500 or more clients per AP and SSID up to 15 per radio	
23	Should support IPv6 from day one	
24	For troubleshooting purposes, the administrator should have the ability to remotely capture 802.11 and / or 802.3 frames from an access point without disrupting client access.	
25	Operating Temperature: -20°C to 65°C	
26	Operating Humidity: up to 95% non-condensing.	
27	The Outdoor AP should be IP67 rated & Wind Survivability Up to 266km/h (165 mph)	
28	Should be WiFi certified, and WPC approved; ETA certificate and TEC certificate to be enclosed	
29	**Certifications** Wi-Fi Alliance: Wi-Fi CERTIFIED a, b, g, n, ac Wi-Fi CERTIFIED ax WPA, WPA2 and WPA3 WMM, Wi-Fi Vantage Passpoint	
30	**Regulatory Compliance** EN60950 Safety/Equivalent Indian Standard EN60601 Medical/Equivalent Indian Standard EN 62311 Human Safety/RF Exposure /Equivalent Indian Standard ROHS UL 2043 Plenum	
31	Warranty & support: 5 years advance replacement warranty and 5 years OEM 24/7 TAC support	

AAA for 1500 users with 4 devices each			
S. No.	**Description**	**Features**	**Compliance (Yes/No)**
1	Make	Please specify the make and model	
		The offered solution can be on prem or cloud based. In case of onprem solution, server to be supplied by the bidder with all the necessary Operating system, required RAM, CPUs to cater the required number of devices mentioned in the subsequent clause.	
2	Functionality	Solution should support Authorization, Authentication & Accounting (AAA), network access control (NAC), BYOD and Guest Access by incorporating identity, physical/device information and conditional elements on a single platform.	
		Should support variety of authentication methods (802.1 X, MAC auth and web auth) for Wired and wireless networking equipment.	
		Solution should support up to 1500 users with 4 devices each from day 1. Licenses/Subscription to be considered accordingly. The solution should be scalable to support 10K users or more in future.	

		Solution should provide facility for phased implementation approach by starting with role-based access management and later incorporating end point health of security measurement.	
		Solution should support RADIUS server for client device authentication and TACACS+ for network device authentication with logging.	
		Solution should have device profiling functionality	
		Solution should have integrated support for Microsoft windows end points for health and posture assessment check to ensure only users complying to policy defined by administrator are allowed to connect on the network.	
		Authentication or authorization support for LDAP, AD, SAML 2.0 & O Auth	
		The solution should have the following features	
		Built-in guest management and device/user on boarding.	
		Web based management interface with dashboard.	
		Reporting and analysis with custom data filters.	
		Data repository for user, device, transaction information.	
		Rich polices using identity, device, and health of conditional elements.	
		Integrated network-based device profiler utilizing collection via SNMP, AD, and HTTP.	
3	BYOD	Support for popular smart devices and traditional computing platforms.	
		Ability to support iOS and Android.	
		The system should correlate user, device, and authentication information for troubleshooting and tracking purposes. It should offer a high-level overview of the devices on the network and their associated users.	
		The system should support automated device onboarding, allowing for secure access through a self-service portal.	
		The system should be able to integrate with Active Directory, allowing authentication of BYOD users based on their identity and device attributes.	
4	Guest Access	**Solution must be capable of providing**	
		Self provisioned Guest access users should be available from day one.	
		Ability to send automated SMS or email credentials to the guest users.	
		Solution should provide at least 5000 SMS for (OTP) based authentication from Day 1	
		The system should allow for the configuration of account details, including time frames and bandwidth limits. Once the account's time frame expires, the user account should automatically become inactive.	
		Solution must be capable of providing advertising services.	
		Guest solution should manage the individual guest credentials in database.	

		Ability to perform caching of MAC address post guest authentication to avoid the need for guest to re-authenticate during the period of their visit.	
		The solution should support auto-login for the self-registration workflow, eliminating the need for guests to retrieve account credentials from SMS or email for their initial login.	
		The solution should support bulk import of guest accounts and provide the capability to send credential notifications via email.	
		A post-login session statistics page should be displayed to users, allowing them to monitor their usage of the assigned quota.	
		The solution should feature a location-based captive portal that displays different landing pages depending on the guest's network connection location.	
		The solution should offer fully customizable self-registration pages for guest account creation.	
5	Licenses/Subscription & support	5 years	
6	Mandatory compliance	All switches, WiFi, WLC, Transceivers, AAA should be from the same OEM for better interoperability, management and support.	

Firewall

ATC features	
The Proposed Solution should support Web management, CLI management & should have dedicated Management Port (RJ45) from day one.	Required
Firewall should have the fesability of PoE/PoE+ ports in the appliance to power up PoE devices like Acces points, without any external dependency.	Required
Firewall should support non-repudiation to strengthen logging data security/privacy	Required
Should have built in zero trust network access funtionality in additon to VPN. Should support DNS security , OEM should offer it sown DNS servre IP's that can add as an intital layer of DNS security.	Required
Must have SD-WAN capability and have feature to create SLA profile with Jitter,Latency,Packet Loss. And same should be demonstrated by OEM/Vender in post bid POC if requested.	Required
SDWAN feature must have source,destination,service,application and users base policy creation capability. Also shuld be able to load balance or load share traffic across multiple gateways on the basis of SLA paramaters. And same should be	Required

demonstrated by OEM/Vender in post bid POC if requested.	
NGFW Firewall Should have Pre-defined dashboards for Traffic, Security, and User behaviour analysis report. Granular Web & Application usage reporting, Network & Threats (IPS, TP, Wireless), VPN, Email, Compliance like HIPAA, PCI, GLBA, CIPA reports and Export reports as HTML, PDF, Excel.	Required
The solution should support Active Directory, eDirectory, RADIUS, LDAP and TACACS+, Server authentication agents for Active Directory SSO, STAS, SATC, Single sign-on: Active directory, eDirectory, RADIUS Accounting.	Required
Azure AD integration, Support for creating users with UPN format for RADIUS authentication.	Required
Firewall should support TLS 1.3 inspection of encrypted traffic. If required bidders should showcase same	Required
If required, all technically qualified bidders should showcase the product capabilities through a demonstration at our premises	Required
OEM Should be SOC2 Type 2 compliant	Required
OEM Should be ISO 9001 & ISO 27001	Required
The OEM should not have been blacklisted by any State & Central government and PSU within the last 5 years.	Required
The NGFW Firewall OS family or Hardware should be certified under security related functions EAL4+,ICSA Lab Firewall Certification, MTCTE certification from TEC.	Required
Manufacturer Authorization (MAF), Make In India OEM Letter, Escalation Matrix for Support	Required
Make In India OEM Letter, should be class 1 MII.	Required

Dated this Day of (Year)
(Signature) (In the capacity of)
Duly authorized to sign the Bid Response for and on behalf of:
(Name and Address of Company) Seal/Stamp of Vendor

Form 6: Performa for Manufacturer Authorisation form (MAF)

Dated: …….

To,
Quality Council of India,
Institution of Engineers Building,
2nd Floor, 2, Bahadur Shah Zafar Marg,
New Delhi - 110002, India

Subject: Manufacturer Authorisation form (MAF) to M/s ..... for……

Ref: GeM Bid No……. dated …….

Dear Sir,

We, M/s……, are established and reputed manufacturer and service provider of……. (Product details), having our registered office at……..We hereby authorise M/s …….. (Bidder name), Office……. to participate in bid and subsequently upon award of the bid to execute the Supply and Installation & Commissioning of our range of products against your above said bid.

Thanking you,
Best regards,

Authorised Signatory

Format for Pre-bid query form

S. No.	Clause no., Page no.	Original clause in RFP document	The point on which Clarification required	Reason for amendment (if any)

Bidders are required to submit their queries as per the above format on their letter head duly signed and also share the word file of the above to the procurement@qcin.org within 1 day from the date of conducting of pre-bid meeting.

ENCLOSURES

ANNEXURE-B: Price Break-up Format/Bill of Quantities (BOQ)

ANNEXURE-C: List of Approved Makes/Manufactures of Materials

ANNEXURE-D: List of Drawings

ANNEXURE- B

Item Number	Item Title	Item Description	Item Quantity	Unit of Measure	Rate (in INR, inclusive of taxes)	Amount (in INR, inclusive of taxes)
1	**Core Switch**	Supply Installation Testing and Commissioning of 10Gbps Core Layer 3 Switch 24 Ports of 1 by 10G SFP plus 4 Ports of 1 by 10G SFP plus or 4 port of 25G SFP28 and 2 x 40G or 1 x 100G QSFP28 Uplink by Stacking Ports from Day 1 Switch should support total of 4 x 40G QSFP28 or 1 x 100G QSFP28 Ports in future Switch should support 1G Base T and 10G Base T Copper RJ 45 Transceiver to connect with any legacy device with 1Gbps port Switch must be supplied with redundant hot swapable fan trays and dual redundant power supply and FANs switch OS should be NDcPP certified Switch should be TEC certified ROHS6 5 years OEM advance hardware replacement warranty All types of Switches transceivers WIFI WLC AAA should be from the same OEM for better compatability management and after sales support For detailed specifications please refer tender document 1 Primary 1 Redundant	2	Nos.		
2	**POE Access switch**	Supply Installation Testing and Commissioning of 24×10 by 100 by 1000 Mbps PoE plus ports 4×10 by 25 GbE SFP28 stacking by uplink ports 370 W PoE budget long distance stacking of 10 switches or more required Switch OS should be NDcPP certified Switch should be TEC certified ROHS6 5 years OEM advance hardware replacement warranty All types of Switches transceivers WIFI WLC AAA should be from the same OEM for better compatability management and after sales support For detailed specifications please refer tender document	16	Nos.		
3	**POE Access switch**	Supply Installation Testing and Commissioning of 24×10 by 100 by 1000 by 2500 Mbps PoE plus ports 4×10 by 25 GbE SFP28 stacking by uplink ports 740 W PoE budget long distance stacking of 10 switches or more required Switch OS should be NDcPP certified Switch should be TEC certified ROHS6 5 years OEM advance hardware replacement warranty All types of Switches transceivers WIFI WLC AAA should be from the same OEM for better compatability management and after sales support For detailed specifications please refer tender document	12	Nos.		

4	**POE Access switch 8×10 by 100 by 1000 by 2500 Mbps**	Supply Installation Testing and Commissioning of 8×10 by 100 by 1000 by 2500 Mbps PoE plus ports 2×10 by 25 GbE SFP28 stacking by uplink ports 240 W PoE budget long distance stacking of 10 switches or more required Switch OS should be NDcPP certified Switch should be TEC certified ROHS6 5 years OEM advance hardware replacement warranty All types of Switches transceivers WIFI WLC AAA should be from the same OEM for better compatability management and after sales support For detailed specifications please refer tender document	1	Nos.		
5	**Non POE Access switch**	Supply Installation Testing and Commissioning of 48×10 by 100 by 1000 Mbps ports 4×10 by 25 GbE SFP28 stacking by uplink ports long distance stacking of 10 switches or more required Switch OS should be NDcPP certified Switch should be TEC certified ROHS6 5 years OEM advance hardware replacement warranty All types of Switches transceivers WIFI WLC AAA should be from the same OEM for better compatability management and after sales support For detailed specifications please refer tender document	60	Nos.		
6	**Fibre modules**	Supply Installation Testing and Commissioning of 25GbE Direct Attach SFP plus to SFP plus copper cable 1 m Access stacking	127	Nos.		
7	**Fibre modules 10GbE SFP**	Supply Installation Testing and Commissioning of 10GbE SFP plus Single Mode transceivers	20	Nos.		
8	**Fibre modules 25GbE SFP28**	Supply Installation Testing and Commissioning of 25GbE SFP28 Single Mode transceivers	10	Nos.		
9	**Fibre modules 1G Copper transceivers**	Supply Installation Testing and Commissioning of 1G Copper transceivers	8	Nos.		

10	**Wi Fi SYSTEM**	Supply Installation Testing and Commissioning of dual band 802 11a by b by g by n by ac by ax Indoor Wireless Access Point with Multi Gigabit Ethernet backhaul 4x4 4 on 5Ghz 1x 2 5Gbps Ethernet 1x1Gbps ethernet PoH by UPoE by 802 3at PoE support Mounting bracket to be supplied along with the APs AP should be TEC and NDcPP certified 5 years OEM warranty All types of Switches transceivers WIFI WLC should be from the same OEM for better compatability management and after sales support For detailed specifications please refer tender document	42	Nos.		
11	**Wi Fi SYSTEM Wireless Controller with 4x10GigE and 4x1GE ports**	Supply Installation Testing and Commissioning of Wireless Controller with 4x10GigE and 4x1GE ports WLC should be TEC and NDcPP certified Should be able to support the required number of APs from day 1 and should be scalable to supppprt upto 2000 APs in a single appliance WLC should be deployed in HA mode 5 years OEM warranty with advance hardware replacement All types of Switches transceivers WIFI WLC AAA should be from the same OEM for better compatability management and after sales support For detailed specifications please refer tender document	2	Nos.		
12	**Wi Fi SYSTEM AAA solution**	Supply Installation Testing and Commissioning of AAA solution for 1500 users with 4 devices each 5 years OEM support All types of Switches transceivers WIFI WLC AAA should be from the same OEM for better compatability management and after sales support For detailed specifications please refer tender document	RO	Nos.		

13	**Fire Wall**	Next Gen Firewall Dual core architecture and dedicated network process unit for better performance Management Purpose I by O Ports 1xRJ45 1xCOM RJ45 Ports Minimum Port Required from Day1 8x 10 GE SFP plus 16x GE RJ45 Less than Flexi card slots more than Flexi card slots minimum Minimum port density Local Storage by SSD 2 x min 240 GB SSD Firewall Throughput 70 Gbps or higher Firewall IMIX 35 Gbps or higher NGFW Throughput 30 Gbps or higher IPS Throughput 29 Gbps or higher Concurrent Connections 17 Million or higher New Sessions Per Sec 450 000 or higher mIpsec VPN Throughput 10 Gbps or higher No of IPSec VPN Tunnels 3000 or higher Threat Protection Throughput and SSL Inspection Throughput 8 Gbps or higher Zero Day Protection Across Network Cloud Users and Network Access Security Solutions Analyze all unknown files using AI ML and sandbox DIP Deep Packet Inspection Cloud based intelligence and analysis Static and Dynamic real time by run time analysis of unknown files effectively identify and block ransomware and unknown threats Threat intelligence analysis reporting etc as per given specification 24 x 7 onsite Support with 36 Months subscription Firewall should have the fesability of PoE by PoE plus ports in the appliance to power up PoE devices like Acces points without any external dependency Should have built in zero trust network access funtionality in additon to VPN Should support DNS security OEM should offer it sown DNS servre IP's that can add as an intital layer of DNS security NGFW Firewall Should have Pre defined dashboards for Traffic Security and User behaviour analysis report Fire wall in active active HA configuration Granular Web and Application usage reporting Network and Threats IPS TP Wireless VPN Email Compliance like HIPAA PCI GLBA CIPA reports and Export reports as HTML PDF Excel OEM Should be SOC2 Type 2 compliant OEM Should be ISO 9001 and ISO 27001 The NGFW Firewall OS family or Hardware should be certified under security related functions EAL4 plus ICSA Lab Firewall Certification MTCTE certification from TEC Make In India OEM Letter should be class 1 MII firewall should be expendable	2	Nos.		

14	**Servers**	**SITC of Server Windows Server 2016 64 bit Intel Xeon E5 2620v3 2 4 GHz 6 core 15MB 85W with 8GB RAM 15GB Free disc space with Min 1 Gigabit by s network interface card etc With CD by DVD player Mouse and Keyboard etc all complete**	1	Nos.		
15	**EPBAX by IPBAX System**	Supply Installation Testing and Commissioning of IP EPABX system Equipped with 08 PRI 16 Trunks 16 Digital 40 IP users and 400 analog ext Expandable upto 1296 port Hardware Platfrom for Unified Communication Server Supports Two Slots for CPU and Two Slots for Power Supply for Redundancy Max Universal Slots 27 Max VOCODER CHNLS 248 Max IP Trunks 99 license free Max VMS CHNLS 64 Max IP Users 2000 Note VOCODER and VOICEMAIL modules are not included For redundancy additional VOCODER and VOICEMAIL modules must be procured	1	Nos.		
16	**EPBAX by IPBAX System Matrix Digital phone EON 510**	Matrix Digital phone EON 510 Programmable Keys 20 4 Context Sensitive Keys 16 DSS Keys Display 240x64 Pixels Graphical LCD with Backlit Color Black Compatible PBX All Variants of SARVAM and ETERNITY Series Polyphonic Ringtone Full Duplex Speaker Phone Hold Conference Redial Transfer Message Wait Lamp Ringer Lamp	3	Nos.		
17	**EPBAX by IPBAX System IP phone Ethernet Ports**	**IP phone Ethernet Ports 2 Gigabit ports PC and LAN SIP 1 SIP Account in Extended 2 SIP Account in Standard Display 240 x 64 Pixels Graphical LCD with Backlit Color Black Programmable Keys 4 Context Sensitive Keys 16 DSS Keys Power Supply PoE**	40	Nos.		
18	**EPBAX by IPBAX System Analogue Feature Phone**	Analogue Feature Phone Supply Installation Testing and Commissioning of Analogue Phone with CLI Caller ID	400	Nos.		
					Grand total (inclusive of taxes)	

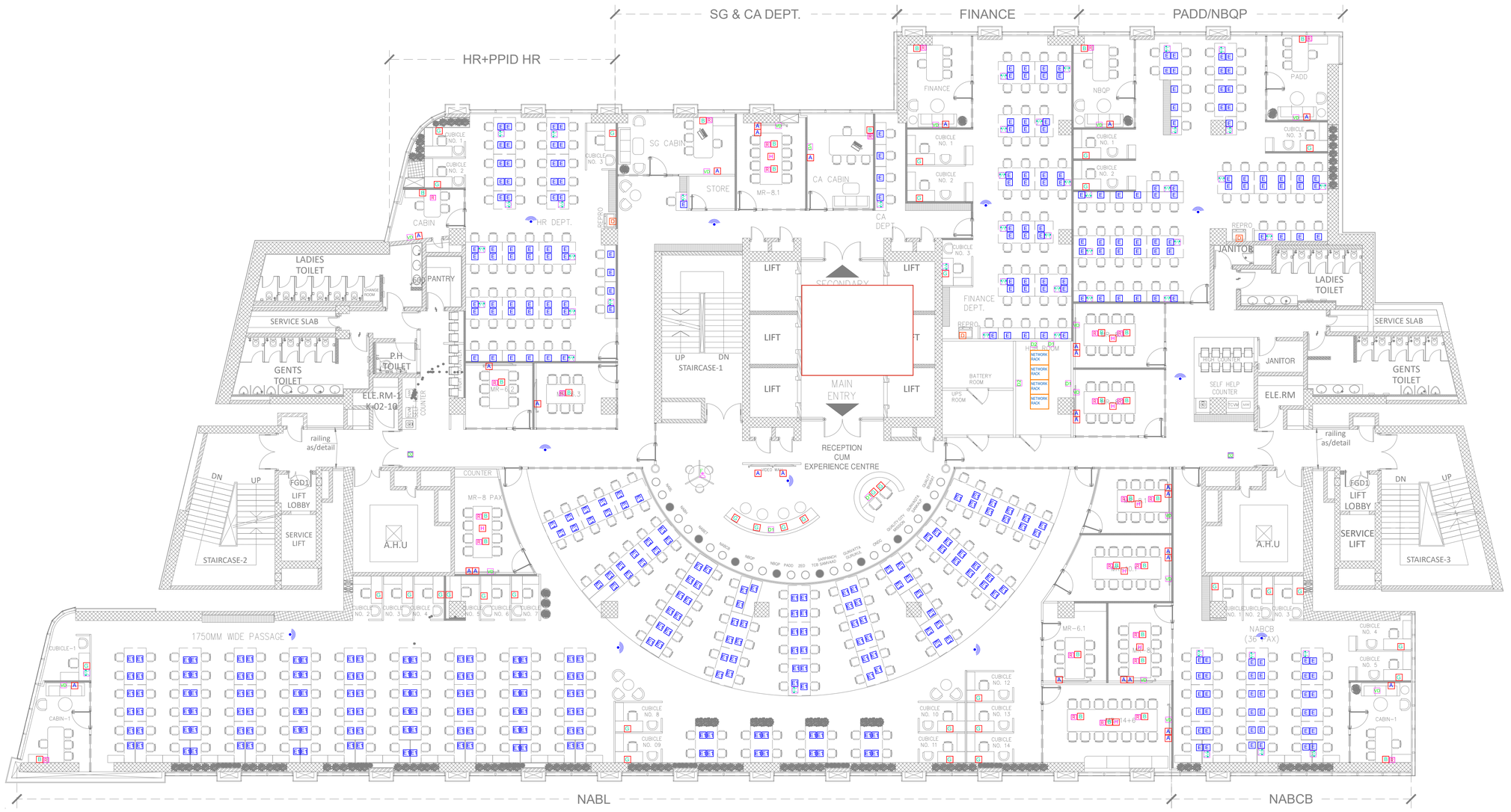
ANNEXURE – C

LIST OF APPROVED MAKES				
PACKAGE - ACTIVE DATA SYSTEM				
S. No.	**ITEM DESCRIPTION**	**PROPOSED MAKE**		
A.	**Active Components**			
1)	L2/L3 Switches / POE Switches	Cisco	HP	Ruckus
2)	Fire Wall	Palo Alto	Fortinet	Sophos
3)	Access Points (WiFi)	Cisco	HP	Ruckus
4)	AAA Solution	Cisco	HP	Ruckus
5)	Server	Dell	HP	Lenovo
6)	SFP Modules	Cisco	HP	Ruckus
7)	EPABX / IPBAX System	Matrix	Alcatel	Unify
8)	IP Phone	Matrix	Alcatel	Unify
9)	Analogue Phones	Matrix	Alcatel	Beetel
	Notes:			
a.	For any other item which is not covered in list of makes, the respective executing agency shall notify well in advance prior to execution. Executing agency shall propose renowned makes with its technical datasheet or sample for review and approval from client/PMC/Architect/Consultant			
b.	The list of approved makes or materials serves as base guideline for the project. However the client reserves the right to choose any of the mentioned makes or any other preferred equivalent makes.			

ELECTRICAL LEGEND:		
SYMBOL	DESCRIPTION	LOCATION
A	TYPE-A # 1 NO. DATA OULET	CABIN'S OR MEETING ROOM
B	TYPE-B # 1 NO. DATA OULET # 1 NO. VOICE OULET	CABIN'S OR MEETING ROOM
C1	TYPE-C1 # 1 NO. DATA OULET	BOARD ROOM
D	TYPE-D # 2 NO. DATA OULET	PRINTING
E	TYPE-E # 1 NO. DATA OULET	WORK STATIONS
E1	TYPE-E1 # 1 NO. DATA OULET # 1 NO. VOICE OULET	WORK STATIONS
G	TYPE-G # 1 NO. DATA OULET # 1 NO. VOICE OULET	CUBICLE OR AS/LOCATION
H	TYPE-H # 2 NO. DATA OULET	MEETING ROOM OR AS/LOCATION

ELECTRICAL LEGEND:	
SYMBOL	DESCRIPTION
D1	1 NO. REDUNDANCY DATA POINT
D1	1 NO. DATA OUTLET
D2	2 NO. DATA OUTLET
D2	2 NO. DATA OUTLET IN CEILING
D1	1 NO. DATA POINT (IN CEILING)
V1	1 NO. DATA OUTLET (VIDEO CONFRENCE)
T1	1 NO. TELEPHONE POINT
	WI-FI ROUTER

Annexure - E



1 SECOND FLOOR PLAN
Scale: 1:125

NOTES:

1. ALL DIMENSIONS ARE IN MM, UNLESS OTHERWISE SPECIFIED.
2. THE DRAWING DIMENSIONS ARE TO BE READ AND NOT SCALED FROM THE DRAWING.
3. ANY DISCREPANCIES SHALL BE BROUGHT TO THE NOTICE OF THE DRAWING ISSUER.
4. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH OTHER RELEVANT DRAWINGS & SPECIFICATIONS GIVEN IN THE TENDER DOCUMENT.
5. ONLY THE LATEST REVISION OF THE DRAWINGS SHALL BE CONSIDERED VALID FOR ALL PURPOSES.
6. THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF "PRIFACTOR ENGINEERS". ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THEIR WRITTEN PERMISSION IS PROHIBITED.

PROJECT:

QCI

KEY PLAN:

BASE PLAN REFERENCE:

ARCHITECTURE:19.11.2024

STRUCTURE: 19.11.2024

ARCHITECT:

STRUCTURE:

ISSUE STATUS:

TENDER DRAWING

REVISION:

Rev. No.	Description

NORTH:

FORMAT: A1 SIZE

SCALE: 1:125

SECOND FLOOR PLAN - ELV

PE-J-TD-E-200

ELECTRICAL LEGEND:		
SYMBOL	DESCRIPTION	LOCATION
A	TYPE-A # 1 NO. DATA OULET	CABIN'S OR MEETING ROOM
B	TYPE-B # 1 NO. DATA OULET # 1 NO. VOICE OULET	CABIN'S OR MEETING ROOM
C1	TYPE-C1 # 1 NO. DATA OULET	BOARD ROOM
D	TYPE-D # 2 NO. DATA OULET	PRINTING
E	TYPE-E # 1 NO. DATA OULET	WORK STATIONS
E1	TYPE-E1 # 1 NO. DATA OULET # 1 NO. VOICE OULET	WORK STATIONS
G	TYPE-G # 1 NO. DATA OULET # 1 NO. VOICE OULET	CUBICLE OR AS/LOCATION
H	TYPE-H # 2 NO. DATA OULET	MEETING ROOM OR AS/LOCATION

ELECTRICAL LEGEND:	
SYMBOL	DESCRIPTION
D1	1 NO. REDUNDANCY DATA POINT
D1	1 NO. DATA OUTLET
D2	2 NO. DATA OUTLET
D2	2 NO. DATA OUTLET IN CEILING
D1	1 NO. DATA POINT (IN CEILING)
VD	1 NO. DATA OUTLET (VIDEO CONFRENCE)
TP	1 NO. TELEPHONE POINT
WI-FI	WI-FI ROUTER

1 FIRST FLOOR PLAN
Scale: 1:100

NOTES:

1. ALL DIMENSIONS ARE IN MM, UNLESS OTHERWISE SPECIFIED.
2. THE DRAWING DIMENSIONS ARE TO BE READ AND NOT SCALED FROM THE DRAWING.
3. ANY DISCREPANCIES SHALL BE BROUGHT TO THE NOTICE OF THE DRAWING ISSUER.
4. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH OTHER RELEVANT DRAWINGS & SPECIFICATIONS GIVEN IN THE TENDER DOCUMENT.
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6. THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF "PRIFACTOR ENGINEERS". ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THEIR WRITTEN PERMISSION IS PROHIBITED.

PROJECT:

QCI

KEY PLAN:

BASE PLAN REFERENCE:

ARCHITECTURE: 23.12.2024

STRUCTURE: 23.12.2024

ARCHITECT:

STRUCTURE:

MEP CONSULTANT:

ISSUE STATUS:

TENDER DRAWING

REVISION:

Rev. No.	Description

NORTH:

FORMAT: A1 SIZE

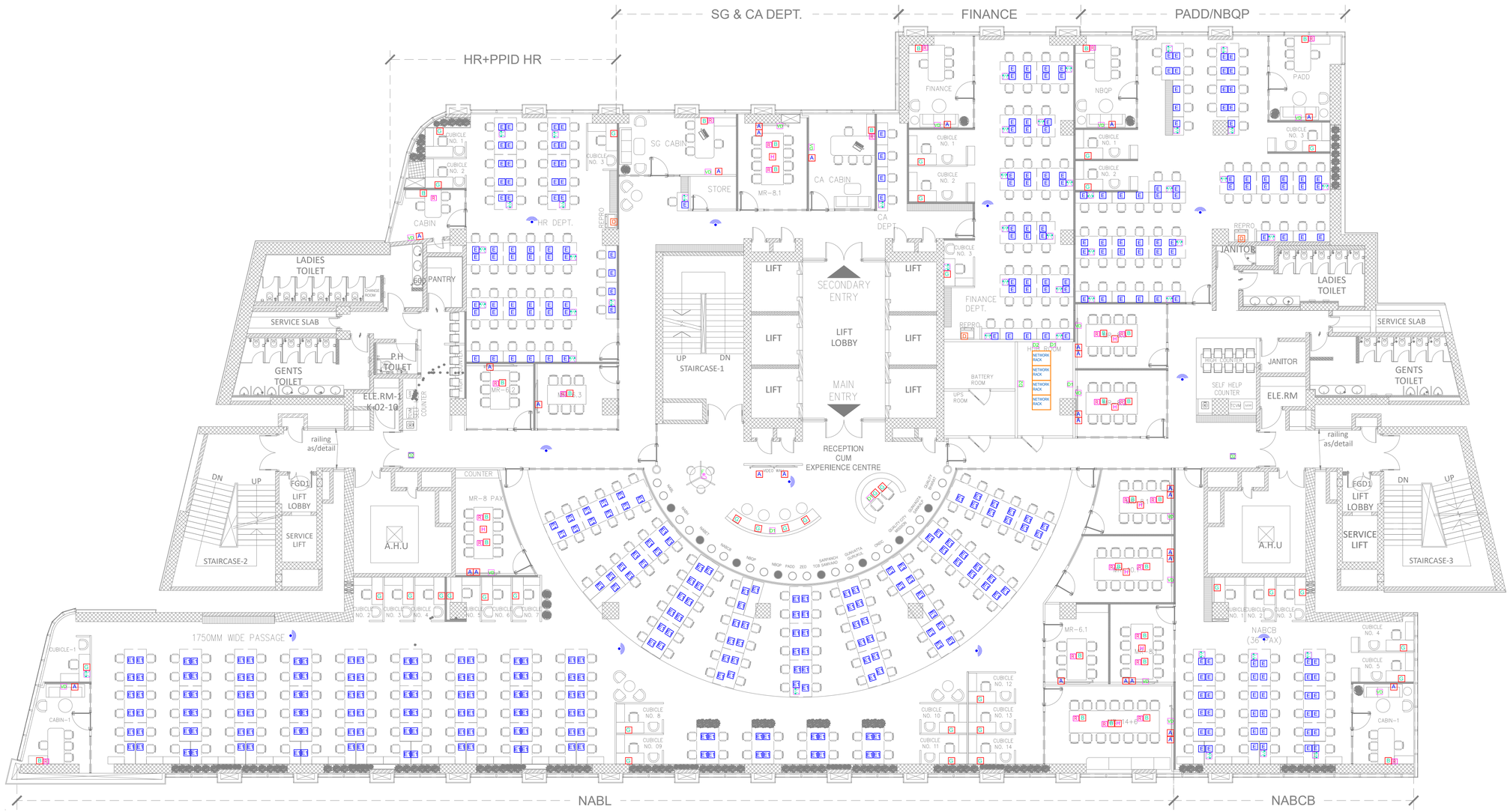
SCALE: 1:100

FIRST FLOOR PLAN - ELV

PE-K-TD-E-200

ELECTRICAL LEGEND:		
SYMBOL	DESCRIPTION	LOCATION
A	TYPE-A # 1 NO. DATA OULET	CABIN'S OR MEETING ROOM
B	TYPE-B # 1 NO. DATA OULET # 1 NO. VOICE OULET	CABIN'S OR MEETING ROOM
C1	TYPE-C1 # 1 NO. DATA OULET	BOARD ROOM
D	TYPE-D # 2 NO. DATA OULET	PRINTING
E	TYPE-E # 1 NO. DATA OULET	WORK STATIONS
E1	TYPE-E1 # 1 NO. DATA OULET # 1 NO. VOICE OULET	WORK STATIONS
G	TYPE-G # 1 NO. DATA OULET # 1 NO. VOICE OULET	CUBICLE OR AS/LOCATION
H	TYPE-H # 2 NO. DATA OULET	MEETING ROOM OR AS/LOCATION

ELECTRICAL LEGEND:	
SYMBOL	DESCRIPTION
D1	1 NO. REDUNDANCY DATA POINT
D1	1 NO. DATA OUTLET
D2	2 NO. DATA OUTLET
D2	2 NO. DATA OUTLET IN CEILING
V1	1 NO. DATA POINT (IN CEILING)
V1	1 NO. DATA OUTLET (VIDEO CONFRENCE)
T1	1 NO. TELEPHONE POINT
	WI-FI ROUTER



1 SECOND FLOOR PLAN
Scale: 1:125

NOTES:

1. ALL DIMENSIONS ARE IN MM, UNLESS OTHERWISE SPECIFIED.
2. THE DRAWING DIMENSIONS ARE TO BE READ AND NOT SCALED FROM THE DRAWING.
3. ANY DISCREPANCIES SHALL BE BROUGHT TO THE NOTICE OF THE DRAWING ISSUER.
4. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH OTHER RELEVANT DRAWINGS & SPECIFICATIONS GIVEN IN THE TENDER DOCUMENT.
5. ONLY THE LATEST REVISION OF THE DRAWINGS SHALL BE CONSIDERED VALID FOR ALL PURPOSES.
6. THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF "PRIFACTOR ENGINEERS". ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THEIR WRITTEN PERMISSION IS PROHIBITED.

PROJECT:

QCI

KEY PLAN:

BASE PLAN REFERENCE:

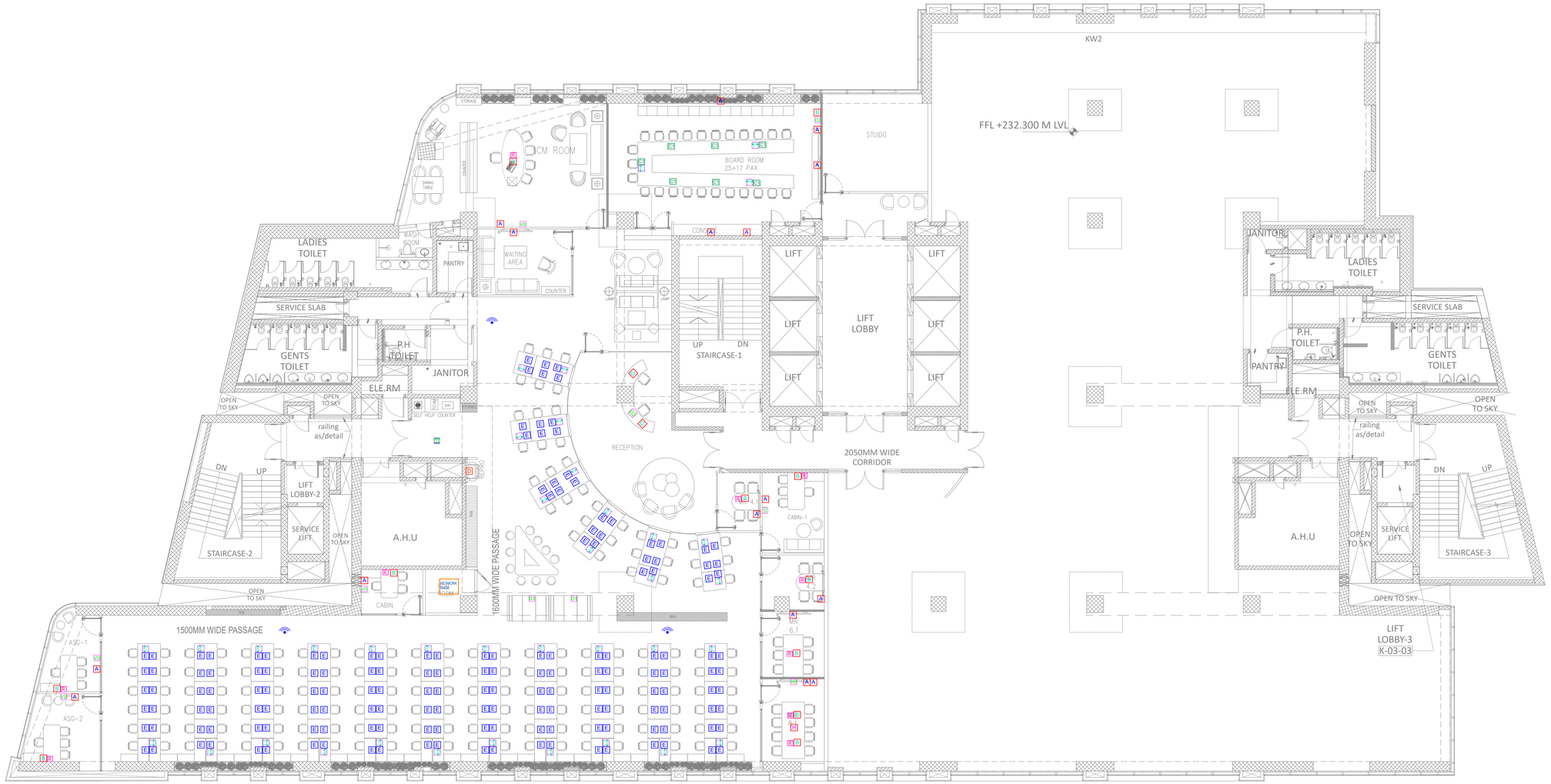
ARCHITECTURE:19.11.2024

STRUCTURE: 19.11.2024

PE-J-TD-E-200

ELECTRICAL LEGEND:		
SYMBOL	DESCRIPTION	LOCATION
A	TYPE-A # 1 NO. DATA OULET	CABIN'S OR MEETING ROOM
B	TYPE-B # 1 NO. DATA OULET # 1 NO. VOICE OULET	CABIN'S OR MEETING ROOM
C1	TYPE-C1 # 1 NO. DATA OULET	BOARD ROOM
D	TYPE-D # 2 NO. DATA OULET	PRINTING
E	TYPE-E # 1 NO. DATA OULET	WORK STATIONS
E1	TYPE-E1 # 1 NO. DATA OULET # 1 NO. VOICE OULET	WORK STATIONS
G	TYPE-G # 1 NO. DATA OULET # 1 NO. VOICE OULET	CUBICLE OR AS/LOCATION
H	TYPE-H # 2 NO. DATA OULET	MEETING ROOM OR AS/LOCATION

ELECTRICAL LEGEND:	
SYMBOL	DESCRIPTION
B	1 NO. REDUNDANCY DATA POINT
D1	1 NO. DATA OUTLET
D2	2 NO. DATA OUTLET
M	2 NO. DATA OUTLET IN CEILING
M1	1 NO. DATA POINT (IN CEILING)
V1	1 NO. DATA OUTLET (VIDEO CONFRENCE)
T	1 NO. TELEPHONE POINT
W	WI-FI ROUTER



1 THIRD FLOOR PLAN
Scale: 1:125

NOTES:

1. ALL DIMENSIONS ARE IN MM, UNLESS OTHERWISE SPECIFIED.
2. THE DRAWING DIMENSIONS ARE TO BE READ AND NOT SCALED FROM THE DRAWING.
3. ANY DISCREPANCIES SHALL BE BROUGHT TO THE NOTICE OF THE DRAWING ISSUER.
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PROJECT:

QCI

KEY PLAN:

BASE PLAN REFERENCE:

THIRD FLOOR PLAN - ELV

PE-J-TD-E-201