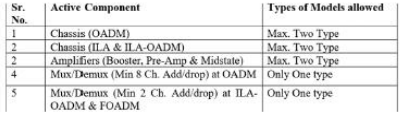
Response to Pre-bid queries Dated 27.09.2024

Tender no. RailTel/Tender/OT/CO/Project/2024-25/MDWDM/013

SN	Clause no. & Chapter no.	Page no.	Sub-clause	Content of the clause requires clarification	Points of clarification required	RailTel's Response
1	3.A.3.5, Chapter-3A	18	10(F)-2(ii)	For 3 or more Direction Sites (New DWDM) :8x100G (Including 2x100G QSFP28 LR4 optic module) & 20x10G SFP+ (Including 16x10G SFP+ optic module)	As per traffic matrix given in tender, maximum paths to be protected/rerouted are 3. All the clients for those paths are either 10G or STM16 or STM4. So, at UNI side, no clients are required. Hence, request Railtel to also to allow 3x100G or 4x100G ports at 3 direction sites.	Minimum 100G-interface configuration for IP-MPLS/OTN Switch has been defined in Tender. However, Bidder can propose higher configuration for IP-MPLS/OTN to meet the requirement of Traffic matrix of Annexure-IV & Annexure-V.
2	3.A.3.5, Chapter-3A	19	10(F)-3(2)	FRR, LFA, RLFA & TI-LFA with 50ms switching	There are other protocols also in IP/MPLS through with traffic engineering and resiliency can also be achieved. Hence, request Railtel, not to restrict it to some protocols and allow other equivalent protocols to achieve traffic engineering and resiliency in less than 50ms.	May please see corrigendum-III
3	3.A.3.5, Chapter-3A	19	10(F)-3 (3)	Sergment Routing	Segement Routing is relatively new feature and may be available in Roadmap of many vendors. Railtel is also not using segment routing in its network. Hence, request Railtel to allow segment Routing to be part of Roadmap also if not available at the time of bidding.	Roadmap is also acceptable and it should be implemented before Provisional Acceptance Certificate(PAC) with no cost to RailTel.
4	3.A.3.5, Chapter-3A	19	10(F)-3 (4)	Routing Protocols- BGP,ISIS,OSPF	There are many standardised IGP protocols. Also, L3 services are not in the scope of tender and may be IGP protocols will be required in future. So, request Railtel to allow IGP protocols to be part of Roadmap also.	
5	3.A.3.5, Chapter-3A	19	10(F)-3 (6)	Segment Routing & LDP interworking with SR.	Segement Routing is relatively new feature and may be available in Roadmap of many vendors. Railtel is also not using segment routing in its network. Also, LDP is not the scope of current tender. Hence, request Railtel to allow segment Routing & LDP interworking with SR.to be part of Roadmap.	
6	3.A.3.5, Chapter-3A	19	10(F)-3 (11)	Management: SSH, SNMP (V2 & V3), Netconf, OpenConfig, Telemetry & Console or Out-of-band Management	Latest TEC GR for NMS systems-TEC-SD-IT-EMT-001-01-MAR-16 does not refer to SDN at any level. This clause is a restrictive clause and may impact the participation of Indian OEM's in the bid. Also, as per same Clause no. 24 in Corrigendum-I Dated 07.09.24 , this feature is removed. Hence, request Railtel to remove Netconf, OpenConfig, Telemetry from the clause.	May please see corrigendum-III
7	3.A.3.5, Chapter-3A	21	12 (ii)	ILA-OADM sites are equipped with a minimum of 2 Nos. of Channel Mux/De-mux (minimum) at each direction and should also have an express port to pass through channels, if it's not dropping in between nodes.	From the clause, we understand that at ILA-OADM sites, for 2 mux/demux are required per direction. So, for 2 Degree ILA-OADM how many Mux/Demux are required. Is it 4nos of mux-demux or 2nos of mux-demux. Request Railtel to clarify.	May please see corrigendum-III
8	3.A.3.5, Chapter-3A	21			We understand that 2 type of chassis is for single technology. If any bidder is proposing multiple technologies, then he can propose more than 2 types of OADM/ILA-OADM chassis (max to 2 chassis per technology). Please confirm if this understanding is correct.	2 type of chassis per technology are allowed.
9	3.A.3.5, Chapter-3A	17	B(xi)	The bidder needs to provide a minimum of 2x10G DWDM line SFP+ (OTU2/OTU2e) with full C-band tunability (DWDM flex grid frequencies) and 4 x10G client SFP+ (LR).	From this clause, we also understand that for 10G/STM-4/STM-16/SDH services, bidder can propose Transponder/Muxponder with capability of having 2x10G DWDM Line or 1x100G DWDM Line. Please confirm if this understanding is correct.	10G transponder is optional, Bidder can propose any transponder configuration based on their solution and traffic matrix requirement.

10	Annexure-II(Corrigendum-I)	12		Network diagram_Route: ER : Rangiya-Jorhat	Route: ER : Rangiya-Jorhat network diagram is showing new DWDM network requirement between **Rangia and Guwahati** with fiber length of 50 km. As per Annexure-III(Fiber Length) no link between Rangiya and Guwahati Also we have existing Coriant optical link between Rangiya to Guwahati as per network diagram Please clarify whether new **DWDM link** need to consider for this section	May please see corrigendum-III
11	Annexure-IV	164	SN-7&8	Protected 100G link between Jorhat-Guwahati Path-1:Jorhat-Rangiya-Guwahati (Alien) Path-2:Jorhat-Lumding-Guwahati (Alien)	For Path -1 there is direct link available as Joharat-Ghani-Guwahati Request Railtel to Kindly clarify if this path(Joharat-Ghani-Guwahati) need to consider for Path-1	May please see corrigendum-III
12	Annexure-V	168	SN-57	Rangiya-Rangapara North 2*10G Linear (Rangiya-Khoriabar-Rangapara North)	Please clarify whether 10G requirement is from Rangia or Guwahati site As 100G capacity asked is from Guwahati	May please see corrigendum-III
13	Annexure-IV	166	SN-7&8	Jodhpur-Bikaner _100G_Protected	As per Annexure-V_10G/STM-16 Layer Traffic Matrix _NR: Jodhpur Jaisalmer . 2x10G is from Jodhpur to Jaisalmer with protected section from Jodhpur-Phalodi. Please clarify whether protected 100G ask is from Jodhpur to Bikaner or this need to change to Jodhpur-Phalodi	May please see corrigendum-III
14	Annexure-II (Corrigendum-I)	24		Network diagram_ Route : NR : Okhla-Jhansi (CDOT)	request Railtel to Kindly confirm whether new OADM sites (As mentioned in the Topology) are required at okhla, Faridabad, Mathura & Jhansi	Only Transponder/IP-MPLS/OTN devices is required to meet the requirement of Traffic matrix of Annexure-IV & Annexure-V.
15	Annexure-II (Corrigendum-I)	25		Network diagram_Route: WR: Shifting of Surat Pop	Kindly confirm whether new OADM sites (As mentioned in the Topology) are required at Ahmedabad, Surat,Bhusawal & Mahalaxmi	Only Transponder/IP-MPLS/OTN devices is required to meet the requirement of Traffic matrix of Annexure-IV & Annexure-V.
16	Annexure-II (Corrigendum-I)	26		Network diagram_Route:WR : Saurashtra	For Saurashtra topology Blue circle legend is marked as ILA-OADM . For all other topology same legend(Blue circle) is mentioned as new ILA. Please clarify whether blue circle legend need to consider as ILA-OADM for wr_Saurashtra topology	ILA-OADM & FOADM Sites are not mandatory at all topology. ILA may be proposed in place of ILA-OADM Sites to meet the requirement of Traffic matrix of Annexure-IV & Annexure-V. Distance from Burdwan to Patrasayer (in Toplogy ER : Bankura-Ranaghat) may be read as 70 km.
17	3.A.3.5, Chapter-3A	15	1(i)	The DWDM OADM and ILA-OADM system at each location shall have the capability to support additional 400G (2x100G/200G) line traffic capacity after equipped with photonic layer and traffic card as per traffic matrix requirement. The system shall provide flexibility to map ODU2/ ODU2e/ ODU3/ ODU4/ ODU flex to 100/200G line ports. The system shall support client and line side protection (50 ms) on proposed 100/200G Traffic Line system (in case required in future).	Pre Bid Queries Reply:Yes, Some traffic slot in DWDM OADM and ILA OADM Chassis at each locations should be kept free for future expanstion 400G (2x100G/200G) line traffic capacity after equipped with photonic layer and traffic card as per traffic matrix requirement. If a free line port is available on any traffic module in any direction, it would be considered for future expansion, or an extra traffic slot has to be proposed for future 400G expansion (2x200G/4X100G), Please confirm If an extra traffic slot has to be proposed, then the optical chassis slot capacity can be considered if 4x100G is supported & Available.	May please see the corrigendum-III

18	3.A.3.5, Chapter-3A	18	10(D)	All Protected services of STM-4/STM-16/10G shall be provision as per the requirement of traffic matrix placed at Annexure-V. and same should be protected from all possible paths (single, dual, inter ring and intra ring fiber cuts) available (including alien paths) in Network as per topology defined in Annexure II. Proposed solution for protection should have support from minimum three different paths (In case of available of paths in topology) from day-1 for services of STM-4/STM-16/10G. Protection switching shall be triggered within 50 ms.	Pre Bid Queries Reply:Yes, All Protected services of STM-4/STM-16/10G shall be provision with minimum 3 different paths protection from day-1. In case, 3 different paths are not available in Network, services should be partial protected from available paths as per Topology. AS per corrigendum "Proposed solution for protection should have support from minimum three different paths without overlapping (In case of available in topology) from day-1 for. Protection switching shall be triggered within 50 ms (on single fiber cut)." Please confirm that a minimum of three different paths must be considered without overlapping if the Figure-Eight scenario is not available	Pre Bid Queries Reply may read as "Proposed solution for protection should have support from minimum three different paths without overlapping (In case of available in topology) from day-1 for. Protection switching shall be triggered within 50 ms (on single fiber cut)."
19	3.A.2, Chapter-3A	12		The scope of work would be System Design, Supply of Equipment at various sites/locations of RailTel. The scope includes installation, testing, commissioning & acceptance of the Muxponder System Network including integration with the existing NOC/OSS system by providing standard northbound API's from supplied controller for management of devices. The scope of work shall include, but not be limited to the following	Need understanding of existing NOC/OSS system	Currenlty , OSS is not available in RailTel Network , OEM should provide standard northbound API's from supplied controller for management of devices with no cost to RailTel.
20	3.A.3.5, Chapter-3A	21	12(iv)	ILA sites are equipped with a minimum of 1 Nos. of Channel Mux/De-mux (minimum) at each direction and should also have an express port to pass through channels, if it's not dropping in between nodes.	Need understanding on site Type ILA	Same has been deleted in corrigendum-I.
21	4.A.2.5.1, Chapter-4A	37		For this purpose, he shall prepare a maintenance plan and make available the services of qualified maintenance engineers stationed at the location approved by Purchaser's Engineer who will guide and supervise the RailTel maintenance staff. The tenderer shall keep minimum two maintenance engineers at the locations approved by RailTel,	Need confirmation whether these resources should be available 24/7 or 8/5.	Tender condition is very clear.
22	4.A.2.5.2, Chapter-4A	37		During this period of maintenance supervision if any lacuna is noticed in the functioning, as a result of any deficiency in work, the contractor will rectify the same at no cost to RailTel. During such rectification if any faulty equipment/modules need replacement or repair, they shall be provided by the contractor from the set of equipment or modules that the contractor should bring to the site of installation in addition to all the materials to be supplied against this contract. Use of spare modules covered under the Schedule of material of this tender shall not be permitted to be used during installation, commissioning and period of maintenance supervision.	Need confirmation, whether RBBN/Railtel engineer is expected on field for handling fault? If RBBN, then cost should be considered to support this requirement (HW arrangement)	Tender condition is very clear.

23	4.A.3.1, Chapter-4A	38		Bidder/OEM shall provide maintenance support after successful completion of the warranty obligations for a minimum period of 5 years. The long term maintenance support shall be comprehensive and include all hardware and software equipment supplied against this contract. RailTel should be extended the benefits of software update/up-grades made by OEM on the system from time to time to improve performance. During this period the scope of work as mentioned in clause 4.A.2 above & its sub clauses will be applicable.	Need confirmation whether Railtel/RBBN will align Field resources in case of any failures during upgrade support Also need confirmation whether any SLA is applicable for upgrade failure cases	Tender condition is very clear.
24	7.5.1, Chapter-7	120		Technical Support Services KPIs & SLA:	Final Resolution SLA to be shared if any	Tender condition is very clear.
25	3.A.2, Chapter-3A	12		The scope of work would be System Design, Supply of Equipment at various sites/locations of RailTel. The scope includes installation, testing, commissioning & acceptance of the Muxponder System Network including integration with the existing NOC/OSS system by providing standard northbound API's from supplied controller for management of devices. The scope of work shall include, but not be limited to the following	Need confirmation on the proposed & existing application Also need confirmation on existing oss integration architecture	Currenlty, OSS is not available in RailTel Network, OEM should provide standard northbound API's from supplied controller for management of devices with no cost to RailTel.
26	3.A.3.5, Chapter-3A	25	19(48)	Proposed EMS/NMS/SDN Controller should have support to create service trail & physical path trail connectivity in between DWDM OADM Nodes. Proposed DWDM ODAM System should have facility to show alarm at physical Path trail & service layer trail on EMS/SDN Controller.	Need confirmation on proposed application, nodes & oss integration	Currenlty, OSS is not available in RailTel Network, OEM should provide standard northbound API's from supplied controller for management of devices with no cost to RailTel.
27	3.A.3.2, Chapter-3A	13		RailTel will provide Rack Space (Maximum 4 RU) per location per direction for OADM & ILA-OADM and Rack Space (Maximum 4 RU) for ILA & FOADM Locations and power (DC) for equipment Installation & Commissioning. In case the offered equipment requires more Rack Space, in that case bidder shall provide & install Smart Telecom Rack (42 RU) with inner air conditioning (Min 1 KW & external outdoor unit and SNMP monitoring of Temperature). In this case DCDB, MCBs, power cables (approx. 15 meters per site) required for extending power from Power distribution point shall be provided by the bidder.	We understand that a maximum of 4RU will be provided by Railtel at the OADM,ILA-OADM,ILA & FOADM locations, considering only active devices. Please confirm. As the traffic requirement at the alien section is huge, the 4RU size may not be sufficient per direction. Therefore, we request that you allow for a subrack size based on the traffic matrix. Wherever traffic bandwidth of 2x200G or more per span is required, please allow the subrack size based on the traffic matrix	May please see corrigendum-III
28	3.A.3.2, Chapter-3A	14	Point 8	The bidder shall consider fiber losses 3 dB fiber repair margin.	Please confirm, For new Optics Proposed Amplifiers (A to B Locations) at both sides for sections (0 to 49 Km distance) should be 0.45 db/KM. in this case maximum link e2e span loss is 28 db. including +3 db. fiber loss margin. For new Optics Proposed Amplifiers (A to B Locations) at both sides for sections (50 to 80 Km distance) should be 0.37 db/KM. in this case maximum link e2e span loss is 32 db. including +3 db. fiber loss margin.	1.Optical Network (photonic layer and electrical layer) should be designed based 0.45 db/KM +3 db. fiber loss margin as per km given in topology.Maximum fiber loss can be considered 32 db per span including repair margin. In case actual losses are more at the time of commissioning of Network, RailTel will either improve the section losses or New ILAs, Amplifiers & Transponder (If required) shall be arranged by RailTel through variation in existing contracts. 2. However, proposed Amplifiers (A to B Locations) at both sides for sections (0 to 49 Km distance) should have capability to cater 28 db fiber section loss for 8 Channel system design and for sections (50 km or more distance) should be capable to cater 32 db fiber section loss for 8 Channel system design in case required with no cost to RailTel.

29	3.A.3.5, Chapter-3A	15	Point vi	For the optical connectors used on the equipment side the 'Optical Return Loss' of these connectors shall be better than 50 dB.	As we understand optical connectors used on the equipment side is the DWDM client side, please confirm.	Yes, understanding is correct.
30	3.A.3.5, Chapter-3A	15	1- Xiii	All the Line ports of 100/200G Traffic Line System shall support minimum back-to-back OSNR sensitivity of -16 db or better at 100G line rate on 40 Channel system.	Please confirm all the Line ports of 100G Traffic Line System shall support minimum back-to-back OSNR sensitivity of -16 db or better at 100G line rate on 40 Channel system.	Yes
31	3.A.3.5, Chapter-3A	17	10-ii	It should provide Physical client ports for QSFP28 pluggable modules to transport 100GbE client signals.	Please confirm It should be SR single rate QSFP28 pluggable modules to transport 100GbE client signals	Tender condition is very clear.
32	Annexure-VI	175		FORMAT FOR TESTING OF DWDM EQUIPMENTS 6.4. Traffic Protection Test for 10G &100G circuit.	As we understand there are two linear circuit can be provisoned in real network, so please confirm this test is not mandatory.	In case of two linear services offered from two path against protected 100G services. In that case, POC for switching condition for 100G services is not applicable.
33	3.A.3.5, Chapter-3A	18	10-F(2)	iii. For 3 or more Direction Sites (New DWDM) :8x100G (Including 2x100G QSFP28 LR4 optic module) & 20x10G SFP+ (Including 16x10G SFP+ optic module v. 10/100G Interface through breakout cable is acceptable and the device should be equipped with required optics & cable (3M)	We understand that the routers must support 8 x 100G interfaces however, it be equipped with corresponding SFPs as per field requirement.	Tender condition is very clear.
34	Corrigendum -1				How many directions are to be considered for alien network	Tender condition is very clear.
35	Corrigendum -1				For regen sites and stub sites where only 10G interfaces are required, we understand we must consider type 1 router as per RFP: i. For 1 or 2 Direction Sites (New DWDM) :2x100G (Including 2x100G QSFP28 LR4 optic module) & 10x10G SFP+ (Including 8x10G SFP+ optic module)	May please see corrigendum-III
36	3.A.3.5, Chapter-3A	16	5	Protection switching shall on Line port of 100/200G be triggered (50 ms) based on Loss of Signal, signal degrade, Pre-FEC BER Signal Failure and OSNR/Q factor signal degrade (if required)	For protected services of 100G, Bidder/OEM can offer Linear 100G services from each Path-1 & Path-2 (as per Annexure-IV). In that case, Protection & Switching is not required	In case of two linear services offered from two path against protected 100G services. In that case, POC for switching condition for 100G services is not applicable.
37	3.A.3.5, Chapter-3A	18	10(D)	All Protected services of STM-4/STM-16/10G shall be provision as per the requirement of traffic matrix placed at Annexure-V. and same should be protected from all possible paths (single, dual, inter ring and intra ring fiber cuts) available (including alien paths) in Network as per topology defined in Annexure II. Proposed solution for protection should have support from minimum three different paths (In case of available of paths in topology) from day-1 for services of STM-4/STM-16/10G. Protection switching shall be triggered within 50 ms.	A lot of mapping and grooming is required to extract STM-4 and STM-16 services. So, is it possible to propose the STM-64 interface instead of STM-4/STM-16? Please confirm	OEM can propose STM-64 services against STM-4/STM-16 services.
38	3.A.3.5, Chapter-3A	20	F(7)	The operating system of the IP-MPLS Routers of same category/series/family should be MEF-9/14 /CE (Carrier Ethernet) Certified OR TSEC approved	We understand that the operating system of the IP-MPLS Routers of same category/series/family should be MEF-9/14 /3.0 CE (Carrier Ethernet) Certified OR TSEC approved. Pls confirm	Yes, understanding is correct.