

RailTel response to Queries for Tender No- RailTel/Tender/OT/CO/P/ 2020-21/DWDM 100G/530 .

S. No.	Document Type	Tender Page No.	Tender Clause No./Section No.	Content of Tender/Corrigendum/ Reply of Queries requiring clarification	Points of clarification required	RailTel's Response
1	RailTel response to bidders query	24	119	In case of fiber loss variation is more than 2db in 1st fiber loss and 2nd fiber loss of same fiber. In that case bidder is allowed to consider lower of both these fiber loss value for link engineering	About fiber loss variations between A-B vs B-A of same span. We understand that below response is applicable only for new DWDM layer however for existing network where Alien wavelength solution is required in RFP we need to consider RFP fiber loss only because rectification won't be feasible being live traffic running on these sections. Request RailTel to kindly confirm if above understanding is correct.	This will be applicable for New DWDM System Only
2	Tender Document	106	1.4.1.14 of Chapter-4G	GE (IR-2, 14xx/15xx/16xx nm CWDM, SM)	This interface is not required from DWDM Box so request to kindly delete.	This clause may be read as deleted
3	Tender Document	107	1.4.1.32 of Chapter-4G	SDI / HD-SDI (Coax Video Transmit)	This interface is not required from DWDM Box so request to kindly delete.	This clause may be read as deleted
4	Tender Document	107	1.4.1.33 of Chapter-4G	SDI / HD-SDI (Coax Video Receive)	This interface is not required from DWDM Box so request to kindly delete.	This clause may be read as deleted
5	Tender	45	1.2.1	Proposed network topology:	MAQ is 2-Dimentional site (page# 45) as per	MAQ may be read as 2D

	Document		b(3) of Chapter-4A	Mumbai-Banglore & Chennai-Banglore	topology on and fiber loss sheet. However at Page#81 in RFP it's mentioned as 3 Direction site. We are considering it's as 2D as per topology and fiber loss (Page # 45). Request RailTel to kindly confirm if we can consider it as 2D site in BoQ.	
6	Corrigendum-V	52	SN-12 (clause 1.2.1 of Chapter-4A)	Bidder shall consider fiber losses with 1 dB additional fiber repair margin per span for Alien Wavelength design & 6 dB fiber repair margin and max fiber loss can be considered upto 33 db per span in New DWDM backbone system (e.g. if current fiber losses is 30 db, fiber repair margin will be 3db, this will not applicable for those spans where optional ILA sites are available in annexure-I). In case of span fiber loss is equal or more than 33 db in that case 1 dB additional fiber repair margin per span shall be considered. Bidder can also considered max 4 more optional ILA sites apart from optional ILA sites are available in annexure-I. Bidder is also required to submit full link budget calculation of required channels 40 along with input parameters Vs output of planning tool. Fiber Characteristic – Forward and reverse path for the existing and New DWDM ILA and OADM Locations are placed as Annexure-I of this chapter.	Adva understand that link budget report has to submit of New DWDM network & Alien network (wherever ADVA optical network is not installed). Please confirm. As ADVA OLS is already deployed at these links and 100G Traffic is running e.g. Mumbai<->Chennai, Mumbai<->Pune, Mumbai<->Bhusaval, Bhusval<->Secundrabad, Chennai<->Vijaywada, Chennai<->Bangalore & Bangalore<->Securandabad so ADVA understand that link budget report is not required to submit against these links. Awaiting response.....	This will be applicable for New DWDM System Only

7	Tender Document	56	30 (O) of Chapyer-4A	Each side of a ROADM is to be split logically and physically, ensuring that there are no single points of failure that would cause both east and west add/drop traffic to be lost.	Adva understand that Mux & Demux module has to propose in each direction at ROADM by pass & ROADM add-drop site Please confirm. Awaiting response....	Mux & Demux module should be provide in each direction at ROADM Sites.
8	Corrigendum-V	53	SN-11 (clause 1.3-1 of Chapter-4A)	Next Generation (NG) new DWDM system shall be based on state of art Modern technology which drives high capacity cost effectively and lowers operational cost. NG DWDM system shall operate at discrete wavelengths in the C-band centered around 193.1 THz frequency as per ITU-T Rec.G.694.1 grid. The proposed transponder shall support transmission of single carrier channel with Software Configurable 100G & 200G line rate as per link budget requirement and Line Port shall be tunable to 100G/200G through software only to run different line rates to cover different application on the same card with no changes to any of the common equipment at the optical or photonic layer provided meeting link budget. Software Configurable 100G & 200G line rate will not be applicable for Muxponder and Muxponder shall support line rate and client rate as per traffic matrix requirement. DWDM link in Next Generation Optical Network shall be designed for 4 Tbps Capacity with End of Life (EoL) not less than 8 years.	As per revised Tender clause ADVA understand that software configurable 100& 200G will not be applicable for 10X10G client traffic and muxponder shall support line & client rate as per 10X10G client traffic. Please confirm ADVA also understand that software configurable 100& 200G will be applicable for 1X100G & 2X100G Client Traffic and Transponder/muxponder shall support line rate 100G&200G for New DWDM & Alien DWDM network. Please confirm	Software Configurable 100G & 200G line rate will not be applicable for Muxponder (10x10 Clients) and Muxponder (10x10 Clients) shall support line rate and client rate as per traffic matrix requirement.

				The NG DWDM system shall be designed for use in transport networks as a protocol transparent solution for a variety of client/services.		
9	Tender document	63	Annexure-I	High link losses	Even after considering the margin lower than 6 db many spans are still with higher losses , we suggest that RailTel should provide the list of more additional ILA sites (in addition to Corrigendum V) as was done in last RFP.	Tender conditions are very clear
10	Tender document	53	1.3 (2) of Chapter-4A	Bidder shall propose minimum 4-degree Flex Grid C- band WSS at ROADM sites in Backbone segment depicted in 1.2.1.	4D Flex Grid ROADM's or WSS are not very common , 4D ROADM normally comes with non Flex Architecture so we recommend to relax Flex Grid C band capability or either allow minimum 9D ROADM .This will allow RailTel to have huge flexibility for future expansions (Addition of more directions)	Tender conditions are very clear
11	Tender Document	63	Annexure-I	NDLS -Ghaziabad -Kanpur Topology	Ghaziabad node is to be considered a single site or two separate sites are to be considered as it is coming in two paths. Even corrigendum V has not given clarity about this.	Ghaziabad is 4 Degree direction site, May please see the topology.
12	Corrigendum-V	12	SN-47 (clause 1.4 of Chapter-4E)	Factory acceptance tests shall be carried out after review and approval of FAT procedure/documents as per bid requirements and review of Pre-Factory acceptance results & shall be conducted at the manufacturing facilities from where the respective equipment/subsystems are offered. In case of imported items, FAT may be conducted in India, if bidder can arrange all testing and measuring facilities in india. Technical parameters for testing in India shall be standard and as defined in the tender document. No additional cost shall be paid to OEM/bidder. The factory	Pls clarify, in case the bidder wants to have the testing at the place of manufacturing (outside india) , pls confirm who bears the travelling charges (including boarding & loading)	Please read Clause 7.5.5 of Chapter-7

			acceptance testing shall be conducted in the presence of the Purchaser/Engineer. The tests shall be carried out on random sampling of 8% lot size with minimum quantity of 4 nos. on main equipment /items and factory acceptance certificates shall be issued. The factory tests shall include but not be limited to: A) Equipment Testing: i) Mechanical checks to the equipment for dimensions, inner and outer supports, finishing, welds, hinges, terminal boards, connectors, cables, painting etc. ii) Electrical checks including internal wiring, external connections to other equipment etc. iii) Check for assuring compliance with standards mentioned in the specifications. iv) Individual check on each/module/sub-assembly in accordance with the modes and diagnostics programs of the Tenderer. v) Checks on power consumption and heat dissipation characteristics of various equipment vi) Environment testing and other laid	
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			down tests in Type Tests plan of the specification of the equipment. vii) Functional testing viii) Any other test not included in FAT document but relevant to the project as desired by the Purchaser/Engineer at the time of factory acceptance testing. B) System Integration Testing Functional and performance test should be conducted for the complete system concerning and connecting the DWDM equipment and all major equipment constituting the system (including the equipment supplied by sub-vendors, as applicable) simulating the complete network with appropriate optical attenuators connecting between DWDM nodes to simulate the optical loss of Optical Fibre Cable. The system shall include the total Network Management System. All the functions of NMS shall be demonstrated in totality (as per requirements/specifications of this document including management of DWDM). All equipment shall be connected using the same cables (interfaces/components) as will be used during final installation so that the system can be tested in its final configuration. This testing shall be		
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			conducted at the manufacturing facility of the main (DWDM) equipment. Tenderer/OEM, shall be paid @ 3.5% of supply cost per annum towards Long Term Maintenance Support after completion of warranty period, to undertake repairs/replacements of all type of module/ card/assembly/ subassembly and update/upgrade of software released during this period and /or which may fail in the network after the warranty. Only incremental cost in % (In Rs.) over and above this, if perceived by the OEM and Tenderer, may be indicated in Schedule of Requirement and shall be added towards evaluation of tender. If however the tenderer feels that his AMC Cost is less than 3.5% per annum, he should give suitable discount in equipment pricing. For AMC he will be paid @ 3.5% per annum only. If the Tenderer quotes a higher base rate for AMC, he will be paid at his quoted rate per annum and five-year differential cost shall be added to offered cost. AMC would have to be valid for minimum period of 5 years after the warranty. This period of 5 year may be extended further with mutual consent of RailTel and Contractor. In case a tenderer quotes AMC rates lower than 3.5%, no advantage will be given to him for evaluation purposes.		
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13	Tender Document	126	7.5.1 of Chapter-7	The supplier/manufacturer shall give a call for inspection within six weeks of issue of Sub PO when the material is ready to be supplied and ready for inspection. The Inspection shall be carried out at supplier's/Manufacturer's facility in India by the Inspecting Authority. The supplier shall make available for inspection all types of equipment's in sufficient numbers so as to create a test setup for carrying out various tests as per the approved test plan and test setup. If equipment is imported, equipment required for test setup only shall be brought to India in the first lot. Balance material shall be dispatched only after inspected material has been cleared and inspection certificate issued.	Would like to clarify : "The supplier/ manufacturer shall give a call for inspection within six weeks of issue of Sub PO when the material is ready to be supplied and ready for inspection. Such pre-shipment/pre-dispatch inspection (if applicable) of the material/equipment/interface cards should be offered and carried out at manufacturer's / supplier's sites by RailTel's authorized representative."	Please see Corrigendum VII

14	Tender Document	127	7.8 of Chapter-7	Marking of Material Supplied: The tenderer should agree to indicate the Manufacture's Name, Month and Year of manufacturing by casting/stamping/etching/embossing, at an appropriate place of each piece supplied, without affecting the functional utility and structural stability of the components/material	Marking of "each" material will be too lengthy process as there will too many line items and would request you to relax the clause to "supplied shall be in accordance with the specifications agreed by the parties"	Please see Corrigendum VII
15	Tender Document	104	1.1.2 of page no. 104	The proposed chassis at OADM sites shall support minimum 8x100G client-side capacity from day-one.	It is understood that, all the OADM nodes are to be equipped with 100G client/line ports as per traffic matrix specified in chapter 4-section 1.2.1.a. on day 1. While, only support is required for 8*100G client capacity. Please clarify	Tender conditions are very clear.
16	Tender Document	105	1.3.2.7 of page no. 105	System should support Optical channel/path protection at DWDM line side or client side	Since L0/L1 control is not required as per RFP, it is understood that the services are to be protected using OPS/splitter based 1+1 client/line protection	Tender conditions are very clear
17	Tender Document	105	1.3.1 & 1.4.1(All features related to 10G Muxponder) of page no. 105	10G Muxponder shall support several ports with OC-3/STM-1, OC-12/STM-4, OC-48/STM-16, OUT1 client rates. And all subsequent features covered under clause 1.3.1 and 1.4.1	Since 10G Muxponders are not required as per traffic matrix specified in chapter 4-section 1.2.1.a., it is understood that DWDM node should only support Muxponders with specified client ports and features if added in future	Tender conditions are very clear. 10G Muxponders are not required as per traffic matrix. 100G Muxponders should support 10x10G client ports.
18	Tender Document	53	1.2.2.3 of page no. 53	Mumbai-Bangalore, Bangalore-Chennai OADM nodes	As per OADM node list specified under mentioned clause, only 10 OADM nodes are there on Mumbai-Bangalore-Chennai link.	Chennai, Trichi and Erode should be considered as OADM sites.

					While as per chapter 4A. Annex II.3b, there are 13 OADM nodes including Chennai, Erode and Trichi. Please clarify if Trichi and Erode are OADM nodes	
19	Tender Document	87	1.2.4 of page no. 87	The specification of client terminals at RailTel NMS centers shall be advised by tenderer. However, the minimum specification of terminal is 4GB RAM, i5 processor, 500GB Hard and 18.5” LED display with each terminal.	It is understood that the required client terminals shall be arranged by RailTel while Bidder shall advise the specifications	Tender conditions are very clear , No Change is Proposed
20	Tender Document	86&87	1.1.1 of page no. 86&87	The envisaged network under present scope is to be managed from Secunderabad NOC as main site. The DR site will be decided by RailTel which will be either Chennai or Mumbai or Kolkata with clients at each of these NOCs and at CNOC.	Please clarify if the NMS software is to be supplied with Geo Redundancy where Secunderabad NOC would be main site and DR would be either Chennai, Mumbai or Kolkata. Also, please specify if NMS hardware is to be supplied for both main and DR site	Tender conditions are very clear
21	Tender Document	42	1.2.1.a of page no. 42	Service Matrix	As per service matrix, the service need to be provisioned and dropped at nodes like Nagpur, Secunderabad, Manmad, Kolkata which are part of existing links of RailTel. Please clarify if OADM nodes are to be considered for these locations also as it has not been mentioned anywhere in RFP?	Tender conditions are very clear
22	Tender Document	40	1.1 of Chapter 4	Clear network diagram	RailTel network diagram is not clear, kindly share clear network diagram.	Attached at Annexure A
23	Tender Document	46	5.1 (g) of Chapter 4	Number free or occupied	a. numbers / wavelengths of free and occupied optical channels (lambda) on each section of the existing network. (ADVA)	Please see the tender document clause 5 of Chapter-4(A).
24	Tender Document	49	5.2 (g) of Chapter 4	Number free or occupied	a. numbers / wavelengths of free and occupied optical channels (lambda) on each section of the existing network. (Ciena)	Please see the tender document

25	Tender Document	73,74	4 (d) of Chapter 4 of Annx-I		1. For the Delhi-Kolkata network, Asansol-Kolkata route is missing.	Asansol-Kolkata is a Alien Route
26	Tender Document	43	1.2.1 (b) of Chapter 4	Diagram looks incorrect as per route	1. On the Delhi-Kolkata network diagram between GZB (Ghaziabad) and Mughalsarai there is a route GZB (Ghaziabad) - LKO (Lucknow) - CNB (Kanpur) - Mughalsarai. However, in the table on p. 63, there is no CNB (Kanpur) - Mughalsarai section. Instead, there is a section of LKO (Lucknow) - Mughalsarai without entering CNB (Kanpur). Is there a mistake in the diagram?	As per Physical Topology, Kanpur to Lucknow will be common path for Kanpur to NDLS and Kanpur to Mughalsarai in protection path. Actual Physical topology is attached for kind reference
27	Tender Document	43	1.2.1 (a) of Chapter 4	line 28	In the channel table on page 43 in line 28, a typo? Must be NDLS-GZB?	Tender conditions are very clear. Its GZB-NIC/SP
28				In diagram its NIC - SP	In diagram its NIC - SD	Its NIC - SP
29	Tender Document	68	5(a) of Chapter 4 of Annx-I	Route for new dwdm Bhuswal – Surat –Vasai–MX Route for Alien wavelength Bhuswal – Surat.	1.For the Delhi-Mumbai network, it was not possible to find the length of the MX-BSL route (on page 68 there is BSL (Bhusawal), but no MX (Mumbai). Or MX is Mahalaxmi?	MX means Mumbai (Mahalaxmi)
30	Tender Document	45, 61 - 66	Chapter 4 of page no. 45, 61, 66	Bangalore - Manmad and Bangalore - Chennai	1. For the Chennai-Mumbai network, p.45 has a BSL intermediate node (Bhusawal) in the PNVL - PUNE section. However, in the table on p. 67-69 PNVL - Pune section does not contain an intermediate BSL node (Bhusawal). Kindly clarify which one is okay.	As per Physical Topology, BSL (Bhusawal) is not intermediate node in the PNVL - PUNE section. Actual Physical topology is attached for kind reference

31	Tender Document	46 to 52	Chapter 4 of page no. 46-52	Diagram of Network element such as Bayface (Ciena and ADVA) with specification.	a.A detailed diagram of the existing network, which shows all the optical components: OADM, ROADM, amplifiers, attenuators, etc .	RFP already captured these details (site role ILA or OADM / ROADM) in tabular format. Please refer Page#46 existing Node details.
					Fixed attenuators details not available.	Fixed attenuators are generally avoided in the DWDM network however 1-2 sites might have these to balance the power. But insertion loss of these are already including in the shared fiber loss mentioned in RFP.
					WSS loss	Please see the Corrigendum V
					a. signal power at the inputs and outputs of amplifiers;	Chapter#4 of RFP & Page# 8 of Corrigendum V already mentioned detailed information about existing network's Photonics (DWDM) components characteristic like Gain, Noise Figure, Insertion loss, 40/80 Channel system etc along with number of channels running on each segment. So considering these parameters & based on required fiber loss & margin OEM can propose the solution. Based on design OEM can suggest minor tuning in amplifier gain & tilt without impacting performance of existing channels.

32	Tender Document	45, 61 - 67	Chapter 4 of page no. 45, 61, 67	Bangalore - Manmad and Bangalore - Chennai	1. In the table on p.67-69 there is a section of Pune - Manmad. It is not used in this project?	Tender conditions are very clear, Section of Pune - Manmad will be used for Alien Wavelength.

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All other terms and conditions of Tender document will remain unchanged along with all previous corrigenda.


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 ED/Operations
 (For and on behalf of RailTel Corporation of India Ltd.)