

“DESIGN, CONSTRUCTION, SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF 2X25 KV ELECTRIFICATION, AND ASSOCIATED WORKS OF DOUBLE TRACK RAILWAY LINES UNDER CONSTRUCTION ON DESIGN BUILD LUMP SUM BASIS FOR MUGHALSARAI – NEW BHAUPUR SECTION OF EASTERN DEDICATED FREIGHT CORRIDOR”

ELECTRICAL WORKS CONTRACT PACKAGE 204

RESPONSES TO PRE-BID QUERIES OF THE BIDDERS

Sr. No.	Reference to Bidding Document	Clarification Sought by the Bidders	DFCC's Response
(1)	(2)	(3)	(4)
205.	<p>Section III, Evaluation and Qualification criteria, Clause 2.2 – Financial Resources</p> <p>Using Form No FIN 3.3 in Section IV, Bidding Forms, the Bidder must demonstrate meeting the following cash flow requirements:</p> <p>US \$ 20 (Twenty) million for the subject contract Bidder should meet the above cash flow requirement as indicated in paragraph 3.1 (i) of Section (III) - Eligibility and Qualification criteria of Prequalification Document issued on 19.02.2014 for this bid and as modified, if any, through addendum.</p> <p>The Audited Financial Statements of the latest completed Financial Years (as required in paragraph 3.1 of Section III - Eligibility and Qualification criteria of Prequalification Document) are to be submitted.</p>	<p>1) Since we have already submitted the audited balance sheets for the last 5 years during PQ, we understand that we have to submit the Audited Balance Sheets of the Latest/Concluded Financial year only with respect to the criteria mentioned under this clause.</p> <p><i>“The Audited Financial Statements of the latest completed Financial Years (as required in paragraph 3.1 of Section III - Eligibility and Qualification criteria of Prequalification Document) are to be submitted”</i></p> <p>2) We also understand that we need not require to re-submit the Form Fin-3.1 which was already submitted during PQ stage.</p> <p>Kindly confirm our understanding.</p>	<p>Audited financial statements along with notes on accounts and schedules for the latest completed financial year is required to be submitted again even if it had been submitted along with the PQ application.</p> <p>FIN 3.1 need not be submitted again with the bid.</p>
206.	<p>Part 2, Section VI, Volume 2, Particular Specification Clause 5.2.1 – Page 426 of 887 --ROLLING STOCK CHARACTERISTICS AND TRAIN OPERATION DATA</p>	<p>As mention in Bid Document of Part-4, the Tractive effort Vs Speed Characteristic Graph is not found. Please provide the missing the Tractive effort Vs Speed Characteristic graph for simulation study.</p>	<p>Please Refer to Addendum No.05, Sr.No.44.</p>

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(1)	(2)	(3)	(4)
	Traction power supply for Mughal Sarai – New Bhaupur section of Eastern Dedicated Freight Corridor shall be designed taking into consideration the rolling stock characteristics and train operation data given below in Table 5.2.1 and Table 5.2.2. The Tractive effort Vs Speed Characteristic of 12000HP locomotives to be utilised on EDFC shall be as included in the reference document of Part-4.		
207.	Part 2, Section VI, Volume 2, Particular Specification Clause 2.1.5 Page 395 of 887 --- The flexible, regulated polygonal Overhead Equipment (OHE) shall be provided for movement of freight trains within MMD as per the Schedule of Dimensions (SOD) of Dedicated Freight Corridor (DFC) – 2013 for Eastern Corridor at a maximum design speed of 120 kmph. It shall be designed with clearances as provided in the SOD.	Please provide Schedule of Dimensions (SOD).	Please Refer the SOD available at website link: http://www.indianrailways.gov.in/railwayboard/uploads/directorate/civil_engg/pdf/DFC-SOD/SSOD_Freight_Corridor_210113.pdf
208.	Part 2, Section VI, Volume 2, Particular Specification Clause 3.1.1 Page 397 of 887 --- The Scope of Work under the Contract as described in this Particular Specification (PS) shall include conducting Traction system simulation study, design, supply, manufacture, construction, Installation, Testing & Commissioning including the technical support, trial runs & integrated testing, supervision of maintenance (during Defect	Please clarify the period for Defect Notification Period after commissioning date.	Please refer sub clause 1.1.3.7 of Particular Conditions- Appendix to Tender at page 870 of 887. Provisions in the Bidding Document are self-explanatory and shall prevail.

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(1)	(2)	(3)	(4)
	Notification Period)		
209.	Part 2, Section VI, Volume 2, Particular Specification Clause 3.1.1 Page 397 of 887 --- (2) Configure Traction system and major components, System architecture, Scheme Designs with Work Breakdown Schedules (WBS) of activities as per the Guidelines/Best practices describing the technology and range of the products with evidences on satisfactory and proven performance.	Please clarify which Guidelines to be followed.	Being a Design - Build contract, General/ functional/performance requirements have been specified. The responsibility of detailed design rests in the scope of the contractor. Please refer sub-clause 1.2.1 of page 393 of 887 and various guidelines/ philosophy/ Guiding principles as specified in the bid document in numerous sub clauses. Provisions in the Bidding Document are self-explanatory and shall prevail.
210.	Part 2, Section VI, Volume 2, Particular Specification Clause 3.1.1 Page 397 of 887 --- Technical support for Execution, Supervision of work, Quality Assurance, Site Safety, Health & environment (SHE) including supervision of maintenance during Defects Notification Period;	Please clarify the duration for supervision of maintenance during Defects Notification Period.	Please refer response to query at Sr. No. 208.
211.	Part 2, Section VI, Volume 2, Particular Specification Clause 3.1.1 Page 397 of 887 --- (11) Training of Employer's personnel;	Please Clarify List of equipment training required and duration (on shore /off shore).	Please refer Chapter 13 of Volume-1 at page 302 of 887 and Chapter-16 of Volume-2 at page 560 of 887. Provisions in the Bidding Document are self-explanatory and shall prevail.

Sr. No.	Reference to Bidding Document	Clarification Sought by the Bidders	DFCC's Response
(1)	(2)	(3)	(4)
212.	<p>Part 2 , Section VI, Volume-2, Particular Specification, Clause 3.3.1 Page 400 of 887 --- (3) 240V, single phase, A.C. Auxiliary power Supply. i. 240 V A.C. single phase, Low Voltage (LV), Auxiliary Power Supply shall be drawn from 25 kV Traction circuit through 10 kVA Auxiliary Transformers at all Power Supply Control Posts i.e. TSS, SP and SSPs. However, TSS shall be provided with additional 100 kVA Auxiliary Transformers including all terminations and cabling.</p>	<p>The TSS drawing no GC/DFCC/PS/TSS/SCH/TYP/101 shows that both the auxiliary transformer 10 kVA and 100 kVA shows the same rating. Please clarify and change the legend numbering in the drawing.</p>	<p>Please Refer to Addendum No.04, Sr.No.24 and Sr. 39.</p>
213.	<p>Part 2 , Section VI, Volume-2, Particular Specification, Clause 3.3.1 Page 401 of 887--- (4) Execution of Cables, Cable containment system and feeder network including the following: a. 25 kV AC cable/ overhead connections from TSSs/ SPs/ SSPs as required to OHE. All connections to across the track OHE from TSS/SSP/SP / shall be through Cables laid under the track (duly protected) obviating the need of the running of Overhead Cross feeders across the tracks and any need of both lines' power block for maintenance.</p>	<p>The Cables laid under the track (duly protected). Please specify What type of protection required and arrangement.</p>	<p>Please refer Sub clause 7.7 at Page 452 of 887, which mentions the relevant standards.</p> <p>Provisions in the Bidding Document are self-explanatory and shall prevail.</p> <p>Please Refer to Addendum No.04, Sr.No13 also.</p>
214.	<p>Part 2 , Section VI, Volume-2, Particular Specification, Clause 3.3.1 Page 401 of 887---</p>	<p>Please provide interface plan with IR</p>	<p>Please refer sub-clause 18.4.4 of page 582 of 887.</p>

Sr. No.	Reference to Bidding Document	Clarification Sought by the Bidders	DFCC's Response
(1)	(2)	(3)	(4)
	(5) 2x25kV AT Feed Overhead Equipment (OHE) c. 1x25kV OH system for the connecting chords to Indian Railways up to IR meeting point as per interface plan with IR.		Provisions in the Bidding Document are self-explanatory and shall prevail.
215.	Part 2 , Section VI, Volume-2, Particular Specification, Clause 3.3.1 Page 402 of 887--- (8) Scope (Electrical Safety and Clearance)	Please provide us minimum number quantity to be considered for Provision of Electrical Safety I.e. Rubber Mats, First aid Boxes, Personal protective equipment Like Goggles, Gloves Helmets eyewash kits danger plate firefighting equipment, Signage, Caution board.	Being a Design - Build contract, General/functional/performance requirements have been specified. The responsibility of detailed design rests in the scope of the contractor. Provisions in the Bidding Document are self-explanatory and shall prevail.
216.	Part 2, Section VI, Volume-2, Particular Specification, Clause 3.3.1 Page 402 of 887--- (9) Scope (Civil Work)	We understand that access road to the TSS location at any location m is not Scope of CP204 Contractor.	Please refer response to query at Sr.No.10. Provisions in the Bidding Document are self-explanatory and shall prevail.
217.	Part 2 , Section VI, Volume-2, Particular Specification, Clause 3.3.2 Page 403 of 887--- (m) Supervision of maintenance during Defect Notification Period; Defects Liability Obligations including those of Permanent Works after commissioning as stipulated.	Specify Defect Notification Period	Please refer response to query at Sr.No.208.
218.	Part 2 , Section VI, Volume-2, Particular Specification, Clause 3.3.2 Page 403 of 887---	Please Clarify List of equipment training required and duration (on shore /off shore).	Please refer response to query at Sr.No.211.

Sr. No.	Reference to Bidding Document	Clarification Sought by the Bidders	DFCC's Response
(1)	(2)	(3)	(4)
	(n) Training for Employer's personnel.		
219.	Part 2 , Section VI, Volume-2, Particular Specification, Clause 3.3.2 Page 404 of 887--- (o) Decommissioning removal and or disposal of temporary work,	As per Clause 3.3.4 Page 408 of 887, Items of work excluded from the scope a) Electrification works pertaining to yard modifications on IR. Is it related to decommissioning in main line? Please clarify the scope. In addition, proposed section will be connected to both the end of the section with New Constructed section of Bhaupur End and Mughal Sarai end. Please clarify the scope of boundaries on either of section with Electrification Contractor (of Mughal Sarai & Bhaupur) of end sections.	The referred sub clause 3.3.2(o) relates to Temporary works to be executed by the Contractor CP-204. Provisions in the Bidding Document are self-explanatory and shall prevail. The boundary of DFCC chainages of adjacent section are already indicated in sub clause 1.3.1 at page 139 of 887 and Part 4 Reference document.
220.	Part 2 , Section VI, Volume-2, Particular Specification, Clause 4.2 Page 410 of 887--- Basic wind pressure * 120 – 200 kgf/m ² , as per wind map based on IS –875. For long bridges (more than 150m) and within 100m from their abutments on either side and on banks, where the height of the catenary above surrounding mean retarding surface is more than 30 meters, the specified 25% reduction in wind pressure shall not be reckoned for purposes of design.	Our understanding is the calculation for Mechanical load for OHE is 150 kgf/m ² .	Provisions in the Bidding Document are self-explanatory and shall prevail.
221.	Part 2 , Section VI, Volume-2, Particular Specification, Clause 4.4.2(5) Page 413 of 887--- (e) The Manufacturer shall have to support	We understand that "maintenance" means it shall be possible to repair the transformers in India. Please clarify the requirements for maintenance support in India.	Provisions in the Bidding Document are self-explanatory and shall prevail.

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(1)	(2)	(3)	(4)
	maintenance and repair of the equipment in India and supply spares till the design life of the material such as transformers etc. in India.		
222.	Part 2 , Section VI, Volume-2, Particular Specification, Clause 4.4.2(5)(g)(x) Page 414 of 887--- (x) Extended Guarantee for 3 years for indigenous equipment after expiry of Defect Notification Period.	Please clarify Defect Notification Period duration from commissioning.	Please refer response to query at Sr.No.208.
223.	Part 2 , Section VI, Volume-2, Particular Specification, Clause 4.6.1(1)(f) Page 417 of 887--- (v) A proposal of the Work Areas outside e.g. proposed locations and design of Contractor's Temporary Works i.e. construction depots, plants, steel, fittings and other component stock pile areas, storage, workshops, camping areas etc. required to execute the Work according to the time frame.	Have DFCC proposed any locations for base Depots, if yes then what are the locations? If not then who will be responsible for the land acquisition of the same?	Please refer sub clause 6 at page 346 of 887, Sub clause 1.2.4 at page 332 of 887. Please refer Addendum No. 05, Sr No 46. Also. Provisions in the Bidding Document are self-explanatory and shall prevail.
224.	Part 2 , Section VI, Volume-2, Particular Specification, Clause 4.6.2(5) (b) (iii) & 3,3,4(1)(b) Page 420 of 887 and 408 of 887--- Incoming EHV transmission lines at the terminal Tower of Supply Authority and TSS Gantry	Two clause are contradictory, Please clarify the scope of Transmission line. As we understand Transmission Line is not in Scope of the CP204 Contractor.	Please Refer to Addendum No.05, Sr.No 45.
225.	Part 2 , Section VI, Volume-2, Particular Specification, Clause 5.2.1 Page 426 of 887--- The Tractive effort Vs Speed Characteristic of 12000HP locomotives to be utilized on EDFC	No such data Tractive effort Vs Speed Characteristic in the reference document of Part-4. Also please provide Speed Vs breaking effort Characteristic.	Please refer response to query at Sr. No. 206.

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(1)	(2)	(3)	(4)
	shall be as included in the reference document of Part-4.		
226.	Part 2 , Section VI, Volume-2, Particular Specification, Clause 6.3(2) (j) Page 433 of 887--- Design of Earth System (j) Aerial Earth Wire (AEW)of appropriate size along the track alignment as per the scheme shown in Part-4 Reference Documents,	Please specify the Size of Aerial Earth Wire (AEW).	Being a Design - Build contract, General/ functional/performance requirements have been specified. The responsibility of detailed design rests in the scope of the contractor. Provisions in the Bidding Document are self-explanatory and shall prevail.
227.	Part 2 , Section VI, Volume-2, Particular Specification, Clause 6.3 Page 434 of 887--- Design of Earth System.	We understand that Copper clad steel rod shall be provided at Earth mat of the TSS/SSP/SP only. All other work of earthing Connection & test pits, electrodes shall not be copper clad mandatory. Please clarify whose scope of work for the following works are; 1) Earthing & Bonding from BEC to Signaling Posts/ Metallic Enclosures to be installed by STP-5 Contractor. 2) Earth bars in the Signaling /Telecom Huts with its connection with BEC.	Being a Design - Build contract, General/ functional/performance requirements have been specified. The responsibility of detailed design rests in the scope of the contractor. The query is not clear as there is no STP-5 contractor for this EDFC section. Please refer Sub clause 4.6.2(6) (d) at page 421 of 887 and 6.3(2) (l) & (m) at page 434 of 887. Please refer sub clause 14.2 on applicable standards and codes for Earthing system at page 775 of 887. Provisions in the Bidding Document

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(1)	(2)	(3)	(4)
			are self-explanatory and shall prevail.
228.	Part 2 , Section VI, Volume-2, Particular Specification, Clause 6.4.1 Page 434 of 887--- Lightning Arresters Lightning arresters shall be installed at each location of TSS, SP, SSP and ATS (if any).All auxiliary transformers shall have provision of spark gap as per RDSO's latest instructions.	Kindly clarify provision of spark gap as per RDSO's latest instructions.	Provisions in the Bidding Document are self-explanatory and shall prevail.
229.	Part 2 , Section VI, Volume-2, Particular Specification, Clause 6.9.2 Page 437 of 887--- The impact of trains with regeneration shall be taken by the Contractor while designing protection scheme. Definite time over-current and back up over current shall be provided. Breaker re-closing facility shall be provided and after first re-closure on the persistence of fault, breaker shall not be closed. Detailed scheme shall be put up for approval of the Engineer at design stage.	our understanding is for designing the protection scheme it is considered only Special distance protection for regeneration operations for Feeder Protection.	Being a Design - Build contract, General/ functional/performance requirements have been specified. The responsibility of detailed design rests in the scope of the contractor. Provisions in the Bidding Document are self-explanatory and shall prevail.
230.	Part 2 , Section VI, Volume-2, Particular Specification, Clause 7.3.2 Page 450 of 887--- (9) The Transformer's noise shall be tested in conformance to IEC60076-10 and shall not exceed 75dB at 1000mm distance from transformer body. In urban areas, the traction transformers shall be enclosed in acoustic barriers where the operational noise contravenes the	Please advise the name of TSS which to be located in urban areas (due to acoustic barriers are required for Transformers).	Please refer sub-clause 7.2 of page 13 of 887. Provisions in the Bidding Document are self-explanatory and shall prevail.

Sr. No.	Reference to Bidding Document	Clarification Sought by the Bidders	DFCC's Response									
(1)	(2)	(3)	(4)									
	requirements of the "The Noise Pollution Regulation and Control Rules, 2000 or later".											
231.	Part 2 , Section VI, Volume-2, Particular Specification, Clause 7.4.1 Page 450 of 887--- <table border="1" data-bbox="264 539 712 647"> <tr> <td>Auto transformer</td> <td>TSS (as required by design)</td> <td>SP, SSP</td> </tr> <tr> <td>Rating</td> <td>8MVA (Minimum)ONAN</td> <td>8 MVA (Minimum) ONAN</td> </tr> <tr> <td>Short circuit Capacity</td> <td>35 times</td> <td>25 times</td> </tr> </table>	Auto transformer	TSS (as required by design)	SP, SSP	Rating	8MVA (Minimum)ONAN	8 MVA (Minimum) ONAN	Short circuit Capacity	35 times	25 times	In TSS drawing it is showing 15 MVA Auto transformer rating but in Document it is showing 8 MVA. Clarify which one to follow.	Please Refer to Addendum No. 04, Sr.No.39.
Auto transformer	TSS (as required by design)	SP, SSP										
Rating	8MVA (Minimum)ONAN	8 MVA (Minimum) ONAN										
Short circuit Capacity	35 times	25 times										
232.	Part 2 , Section VI, Volume-2, Particular Specification, Clause 7.8.1 Page 454 of 887--- Civil Works & Illumination At TSS, SP, SSP And At Stations(if any) (5) Foundations for all the equipment including those for future transformer and associated protection equipment as planned for Main and Standby Transformers and organizing the layout accordingly to accommodate the future provisions & capacities of the equipment,	We understand that foundation of all CT, PT, LA, Circuit Breaker along with Transformer of future bay are in scope of the CP-204 Contractor.	Please refer sub clause 5.1.2(2) at page 423 and sub clause 7.8.2 at page 454 of 887. Provisions in the Bidding Document are self-explanatory and shall prevail.									
233.	Part 2 , Section VI, Volume-2, Particular Specification, Clause 8.2.11 Page 462 of 887--- OHE arrangement at Stations and Stabling lines: The OHE at Stations shall be arranged with adequate isolations to receive the Train at the stations or Loop lines in case the former is faulty. Currently the loop length is suitable for accommodating train length of 750m at crossing stations. The OHE shall be designed to extend it	Please clarify OHE shall be designed to extend it further to accommodate loop line extension from 750m to 1500m. (Using overlap or slicing the OHE).	Please Refer to Addendum No.05, Sr.No.51.									

Sr. No.	Reference to Bidding Document	Clarification Sought by the Bidders	DFCC's Response
(1)	(2)	(3)	(4)
	further to accommodate loop line extension from 750m to 1500m.		
234.	Part 2 , Section VI, Volume-2, Particular Specification, Clause 8.3.3 Page 463 of 887--- Sub-sectioning and Paralleling Post (SSP) (2) At Junction stations there shall also be an isolation point at the boundary between the Eastern Dedicated Freight Corridor infrastructure and Indian Railways infrastructure through a neutral section. The neutral section between DFCCIL and Indian railway OHE including the Chord connection to IR shall be provided by the contractor.	Please clarify The neutral section between DFCCIL and Indian railway OHE including the Chord connection to IR shall be provided by the contractor.	Provisions given in 8.3.3 (2) at Page 463 of 887 are self- explanatory and shall prevail. Attention is also drawn to Clause 3.3.1(5)(c) at Page 401 of 887.
235.	Part 2 , Section VI, Volume-2, Particular Specification, Clause 8.3.5 Page 463 of 887--- Auto-transformer Stations(ATS) Additional ATS (Auto Transformer Stations) (if any) shall be provided based on the traction simulation study to ensure that the accessible voltage does not exceed the limits laid down in International Standards.	Specify International Standards for further clarification.	Please refer Sub clause 5.3 on Page 427 of 887 Provisions in the Bidding Document are self-explanatory and shall prevail.
236.	Part 2 , Section VI, Volume-2, Particular Specification, Table 8.4.1 Page 464 of 887--- Contact wire 150 sq.mm.	Although contact wire is specified as copper alloy as per EN 50119" is acceptable . Can we understand that exact alloy with copper.	Provisions in the Bidding Document are self-explanatory and shall prevail.
237.	Part 2 , Section VI, Volume-2, Particular Specification, Table 8.4.1 Page 464 of 887--- Catenary (Messenger)Wire 120 sq.mm	Please confirm that any copper alloy conforming to DIN 48201- T1&T2, EN50119 is acceptable and Mg-Cu is not mandatory?	Provisions in the Bidding Document are self-explanatory and shall prevail.

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(1)	(2)	(3)	(4)
238.	Part 2, Section VI, Volume-2, Particular Specification, Table 8.4.1 Page 464 of 887--- 25 kV feeder wire.	DFCC has mentioned the size of Contact, catenary a What sizes shall be taken for the 25 kv feeder wire.	Being a Design - Build contract, General/ functional/ performance requirements have been specified. The responsibility of detailed design rests in the scope of the contractor. Provisions in the Bidding Document are self-explanatory and shall prevail.
239.	Part 2 , Section VI, Volume-2, Particular Specification, Table 8.4.1 Page 464 of 887--- Aerial earth wire.	DFCC has mentioned the size of Contact, catenary a What sizes shall be taken for the Aerial earth wire.	Please refer response to Query at Sr. No. 226.
240.	Part 2 , Section VI, Volume-2, Particular Specification, Table 8.4.1 Page 464 of 887--- Buried Earth wire.	DFCC has mentioned the size of Contact, catenary a What sizes shall be taken for the Buried Earth wire.	Being a Design - Build contract, General/ functional/performance requirements have been specified. The responsibility of detailed design rests in the scope of the contractor. Provisions in the Bidding Document are self-explanatory and shall prevail.
241.	Part 2 , Section VI, Volume-2, Particular Specification, Clause 8.4 Page 465 of 887--- (6) Negative Feeders (NF) In 2x25 KV traction systems, OHE line will be equipped with negative feeders of AAAC, supplying power to auto-transformers. In two track or multi track areas, two negative feeders will be used, one on each side of the tracks. The NF will be strung from the super masts attached as extensions on the OHE masts or Extended OHE mast. The NF shall normally be	please clarify the minimum clearance between feeders and the catenary system.	Please refer the sub clause 3.3.1 (8) (b) at Page 402 of 887. Provisions in the Bidding Document are self-explanatory and shall prevail.

Sr. No.	Reference to Bidding Document	Clarification Sought by the Bidders	DFCC's Response
(1)	(2)	(3)	(4)
	placed on the track side of the mast. The suspension insulators of NF shall also follow the norms as given for OHE. The clearance between feeders and the catenary system should remain adequate under adverse wind & highest ambient temperature conditions including gap as essential to minimize the electrocution of birds/ crows as per schematic attached in reference document.		
242.	<p>Part 2 , Section VI, Volume-2, Particular Specification, Clause 8.4 Page 465 of 887---</p> <p>(7) The proposed sizes of all types of conductors, including jumpers, droppers etc. Shall meet the application duty requirement and will be validated through detailed design calculations and the results of simulation studies. The Conductor of higher sizes shall be provided if needed as per the results of simulation study conducted by the contractor. The Contractor may where practical, optimize on the number of parallel feeders and shall install them where necessary.</p>	DFCC has mentioned the size of Contact, catenary a What sizes shall be taken for jumpers.	<p>Being a Design - Build contract, General/ functional/performance requirements have been specified. The responsibility of detailed design rests in the scope of the contractor.</p> <p>Provisions in the Bidding Document are self-explanatory and shall prevail.</p>
243.	<p>Part 2 , Section VI, Volume-2, Particular Specification, Clause 8.4 Page 466 of 887---</p> <p>(8) The multi train simulations shall be used to prove that the wire temperatures are within design limits as stipulated in EN-50119, under all operational configurations. The Contractor shall identify any operational limits in the design report.</p>	Please clarify the number of train in the section for Simulation purpose.	<p>Please refer sub clause 5.2.2 at page 426 of 887.</p> <p>Provisions in the Bidding Document are self-explanatory and shall prevail.</p>
244.	Part 2 , Section VI, Volume-2, Particular	Please specify the type of ATD (3 pulley or 5 pulley type	Being a Design - Build contract,

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(1)	(2)	(3)	(4)
	<p>Specification, Clause 8.4 Page 466 of 887---</p> <p>(10) The tension length of OHE is governed by the limitations imposed by the expansion and contraction due to temperature changes and the system design chosen to accommodate this change while providing suitable tensioning of the system. While defining the maximum tension length, particular attention must be paid to the along-track movement and stagger change. Tensions to be adopted in different overhead conductors shall be specified by the designer along with the system of anchoring: whether combined or separately for the catenary and contact wires and accordingly the ATD assembly shall be adopted. The tension length and contact wire pre-sag and gradient shall be decided, supported by the requisite calculations, for smooth and spark-free current collection by the loco pantographs.</p>	<p>or gas ATD).</p>	<p>General/ functional/performance requirements have been specified. The responsibility of detailed design rests in the scope of the contractor.</p> <p>Provisions in the Bidding Document are self-explanatory and shall prevail.</p>
245.	<p>Part 2 , Section VI, Volume-2, Particular Specification, Table 8.10.2 Page 468 of 887---</p> <p>The Contractor shall ensure that the range of cantilever frame components is suitable for the loadings and applications shown in the Drawings and these Specifications.</p>	<p>Please clarify cantilever frame components.</p>	<p>Being a Design - Build contract, General/ functional/performance requirements have been specified. The responsibility of detailed design rests in the scope of the contractor.</p> <p>Provisions in the Bidding Document are self-explanatory and shall prevail.</p>
246.	<p>Part 2 , Section VI, Volume-2, Particular</p>	<p>Please provide DFC-SOD-2013 for Eastern corridor.</p>	<p>Please refer response to query at Sr.</p>

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(1)	(2)	(3)	(4)
	<p>Specification, Clause 8.10.5 Page 468 of 887---</p> <p>The contact wire registration profile shall accommodate the permissible extremes of uplifted and swayed pantograph movement in addition to the effects of track tolerances and include allowance for mechanical and electrical clearances and to be in accordance with the stipulations of DFC-SOD-2013 for Eastern corridor.</p>		No.207.
247.	<p>Part 2 , Section VI, Volume-2, Particular Specification, Clause 8.13.3 Page 469 of 887---</p> <p>Cables shall be placed in protective metallic Pipe/ conduit to protect the cable vertically up to a height of 1.8m above the ground to protect against mechanical damages/vandalism. The Bottom end of metallic conduit shall be embedded in the concrete/ the plinth level of structure and top end shall be sealed to avoid the trapping of the Rain Water.</p>	Please classify the type of metallic Pipe/ conduit and specification.	<p>Being a Design - Build contract, General/ functional/performance requirements have been specified. The responsibility of detailed design rests in the scope of the contractor.</p> <p>Provisions in the Bidding Document are self-explanatory and shall prevail.</p>
248.	<p>Part 2 , Section VI, Volume-2, Particular Specification, Clause 8.21.3 Page 475 of 887---</p> <p>For this purpose, a steel rail (one being used for track) of minimum of 52 kg/m, length of 13 m shall be buried near the track at the above locations at a depth of about 1 m to form a part of the earthing system. The buried rail shall also be connected by means of at least four separate distinct connections made with steel armoured PVC</p>	<p>Our understanding, a steel rail (one being used for track) of minimum of 52 kg/m, length of 13 m shall be buried near the track at the above locations at a depth of about 1 m to form a part of the earthing system is provided by Track Contractor and the adequate connections are to be made by Traction contractor.</p> <p>Also please specify the steel armoured PVC insulated cables of adequate size to the traction rails.</p>	Please refer sub-clause 6.1.3(2) (r) of page 430 of 887.

Sr. No.	Reference to Bidding Document	Clarification Sought by the Bidders	DFCC's Response
(1)	(2)	(3)	(4)
	insulated cables of adequate size to the traction rails. In cases where the feeding post is located separately, away from the traction substation, the buried rail shall be provided at the feeding post (where the midpoint of the auto-transformer winding at the substation is grounded).The connections shall be maintenance free, self-gripping type. Wherever, such bonds pass along or across the tracks, it shall be routed along the sleepers using proper fasteners and clamps so as to avoid any damage/disconnection during ballast screening or tie-tamping of the track.		Being a Design - Build contract, General/ functional/performance requirements have been specified. The responsibility of detailed design rests in the scope of the contractor. Provisions in the Bidding Document are self-explanatory and shall prevail.
249.	Part 2 , Section VI, Volume-2, Particular Specification, Clause 13.2 Page 535 of 887--- Table 13.2.1: Quantity of Contract Spares.	Please confirm that whether additional payments will be done in case the employer request extra spare materials	All variations in the contract will be dealt with in accordance with the GENERAL CONDITIONS, clause 13 read with the corresponding clause in PARTICULAR CONDITIONS
250.	Part 2 , Section VI, Volume-2, Particular Specification, Clause 15.3 Page 559 of 887--- Contractor's office during defect notification period supervisory and maintenance staff with a Dedicated Desk Officer to attend the calls of the Employer's Personnel and inform their Head of Maintenance who would promptly act to attend the emergencies/ maintenance calls including organizing of all the resources i.e. artisans and Material.	Have DFCC proposed any locations for Contractor's office, if yes then what are the locations? If not then who will be responsible for the land acquisition of the same?	Please refer response to query at Sr. No. 223.
251.	Part 2 , Section VI, Volume-2, Particular Specification, Clause 15.4 Page 559 of 887---	Have DFCC proposed any locations for mobilize the team for Man & Material required during defect notification period, if yes then what are the locations? If	Please refer response to query at Sr. No. 223.

Sr. No.	Reference to Bidding Document	Clarification Sought by the Bidders	DFCC's Response
(1)	(2)	(3)	(4)
	<p>Man & Material required during defect notification period The contractor shall resource the required staff and Material during the Defect Notification period at their own cost 24hrs all 7 days of every week to attend the Defects. The deployment of staff shall be approved by the Engineer. The Material if any used from the spares shall be made good. The contractor shall arrange all the Tools & Plants needed to attend the defects during the Defect Notification period.</p>	<p>not then who will be responsible for the land acquisition of the same?</p>	
252.	<p>Part 2 , Section VI, Volume-2, Particular Specification, Clause 16.2.3 Page 560 of 887--- The Training Plan shall include training at plant / manufacturer works as above and shall include 300 man-days as a minimum at OEM's Place. The plan shall also include visit to different places, work- areas plants. The cost of travel and stay shall be borne by the Employer. The training should also include 300 instructor man-days as minimum to impart training at work site.</p>	<p>Please provide the list of equipment for training plan to incorporate 300 instructor man days.</p>	<p>Provisions in the Bidding Document are self-explanatory and shall prevail.</p>
253.	<p>Part-4 2_Power Supply Schemes and SCADA Layouts Drawing: SCHEMATIC DIAGRAM OF 2X27KV SUB-SECTIONING AND PARALLELING POST (SSP)/SP</p>	<p>Please confirm that protection PT at 2x25kV Circuit breaker (Legend: S.NO 11.) is not mandatory</p>	<p>Indicative drawings are included in Part 4 Reference document. Please refer sub clause 6.9 at page 437 to 439 of 887. Provisions in the Bidding Document are self-explanatory and shall prevail.</p>

Sr. No.	Reference to Bidding Document	Clarification Sought by the Bidders	DFCC's Response
(1)	(2)	(3)	(4)
254.	Part-4 2_Power Supply Schemes and SCADA Layouts Drawing: SCHEMATIC DIAGRAM OF 2X27KV SUB-SECTIONING AND PARALLELING POST (SSP)	Please confirm, <ul style="list-style-type: none"> • Aluminum LV cables may be used for return current. • Cables are not required to be rated for 3,3kV. Aluminum/Steel conductors 	Provisions in the Bidding Document are self-explanatory and shall prevail.
255.	Part-4 2_Power Supply Schemes and SCADA Layouts Drawing: SCHEMATIC DIAGRAM OF 2X27KV SUB-SECTIONING AND PARALLELING POST (SSP)	Our observations as per the drawings is Two pole motor operated isolators are installed together with 2 pole circuit-breakers. Two pole hand operated isolators are installed together with 2 pole interrupters. Kindly confirm.	Please refer addendum No.05 (Sr.No.47)
256.	Part-4 2_Power Supply Schemes and SCADA Layouts Drawing: SCHEMATIC DIAGRAM OF 2X27KV SECTIONING AND PARALLELING POST (SP)	Please confirm that protection PT and CT at 2x25kV Circuit breaker (Legend: REF.NO 30.) are already existing in schematic diagram (Legend: REF.NO 29 and 12.), no extra equipment is required	Please refer addendum No.05 (Sr.No.48)
257.	Part-4 2_Power Supply Schemes and SCADA Layouts Drawing: SCHEMATIC DIAGRAM OF 2X27KV SECTIONING AND PARALLELING POST (SP)	Please compare SP and SSP philosophy regarding 2 pole motor operated isolators. The observations from SSP seem not to be valid for SP. Two pole motor operated isolators are not foreseen (Legend: REF.NO 27.) Two pole hand operated isolators are installed together with 2 pole interrupters and circuit breakers. Please provide advice.	Please refer response on query to Sr. No. 255.
258.	Part-4 2_Power Supply Schemes and SCADA Layouts Drawing: SCHEMATIC DIAGRAM OF 220/132/54 KV TRACTION SUB-STATION	Please compare SP and SSP philosophy regarding 2 pole motor operated isolators. The observations from SSP seem not to be valid for TSS. Two pole motor operated isolators are not foreseen	Please refer addendum No 04 Sr.No.39, & addendum No. 05 Sr.No.47 and 48.

Sr. No.	Reference to Bidding Document	Clarification Sought by the Bidders	DFCC's Response
(1)	(2)	(3)	(4)
		<p>(Legend: REF.NO 11). Motor Drive has been missed in legend (Legend: REF.NO 26.) is deemed without motor drive.</p> <p>Please confirm.</p>	
259.	<p>Part-4 2_Power Supply Schemes and SCADA Layouts Drawing: SCHEMATIC DIAGRAM OF 220/132/54 KV TRACTION SUB-STATION</p>	<p>Please compare SP and SSP and TSS philosophy regarding use of 2 pole interrupter or circuit breaker for autotransformer bay. The requirement of circuit breaker or interrupter for AT Bay is not clear since the legends are similar in the drawing. Selection of these equipment may also affect SP and SSP and influence the use of motorized or hand operated isolators. Kindly clarify.</p>	<p>Indicative drawings are included in Part 4 Reference document.</p> <p>Being a Design - Build contract, General/ functional/ performance requirements have been specified. The responsibility of detailed design rests in the scope of the contractor.</p> <p>Provisions in the Bidding Document are self-explanatory and shall prevail. Please refer addendum 05, Sr.No.47 & 48 also.</p>
260.	<p>Part 2 section VI Vol 3 Auxiliary substation location</p>	<p>The auxiliary substation location is not defined. Kindly confirm that it is used only in Junction and Crossing stations.</p>	<p>Being a Design - Build contract, General/ functional/ performance requirements have been specified. The responsibility of detailed design rests in the scope of the contractor.</p> <p>Provisions in the Bidding Document are self-explanatory and shall prevail.</p>
261.	<p>Part 2 section VI Vol 3 Auxiliary transformer Minimum rating for 11 kV substation</p>	<p>The Auxiliary transformer minimum rating for 11 kV substations is not defined. Kindly provide the same</p>	<p>Being a Design - Build contract, General/ functional/ performance requirements have been specified. The</p>

Sr. No.	Reference to Bidding Document	Clarification Sought by the Bidders	DFCC's Response				
(1)	(2)	(3)	(4)				
			<p>responsibility of detailed design rests in the scope of the contractor.</p> <p>Provisions in the Bidding Document are self-explanatory and shall prevail.</p>				
262.	Part 2 section VI Vol 3 Page 839 of 887 is not legible	Kindly provide the same.	Please refer Part 4 Reference documents- Power supply Schemes and SCADA layout, Drg. No. GC/DFC/E&M/Station/801.				
263.	Part 2 section VI Vol 3 page 763 of 887 DG set Minimum rating / Emergency load details	Kindly provide the minimum rating /emergency load for DG selection.	<p>Being a Design - Build contract, General/ functional/ performance requirements have been specified. The responsibility of detailed design rests in the scope of the contractor.</p> <p>Provisions in the Bidding Document are self-explanatory and shall prevail.</p>				
264.	Section IV Bidding Forms. Form-SUP <table border="1" data-bbox="259 1031 741 1118"> <tr> <td data-bbox="259 1031 383 1118">Major Items of Materials, Equipment or Services to be subcontracted</td> <td data-bbox="383 1031 517 1118">Proposed Subcontractor, Supplier, or Service Provider</td> <td data-bbox="517 1031 607 1118">Nationality/ Location of the subcontractor, supplier or service provider</td> <td data-bbox="607 1031 741 1118">Approximate Value of proposed subcontracting Items (in percentage of the approximate total value of the Contract)</td> </tr> </table> Column 1 the bidders are requested to provide "Major Items of Materials, Equipment or Services to be subcontracted"	Major Items of Materials, Equipment or Services to be subcontracted	Proposed Subcontractor, Supplier, or Service Provider	Nationality/ Location of the subcontractor, supplier or service provider	Approximate Value of proposed subcontracting Items (in percentage of the approximate total value of the Contract)	<p>Our understanding is that the bidders are required to provide the details of Manufacturers / Contractors, for Major Materials, Equipment or Services to be engaged for this Contract Package -204.</p> <p>Considering the diversity of Materials required to meet the project deliverables, the Majority / Full of the Supply items will be outsourced and Services will be sub-contracted during the execution of the Contract.</p> <p>In view of the above the word " to be sub-contracted" is misleading since both suppliers and service provider's details will be a part under this form</p> <p>In view of the above it is requested to change the</p>	Provisions in the Bidding Document are self-explanatory and shall prevail.
Major Items of Materials, Equipment or Services to be subcontracted	Proposed Subcontractor, Supplier, or Service Provider	Nationality/ Location of the subcontractor, supplier or service provider	Approximate Value of proposed subcontracting Items (in percentage of the approximate total value of the Contract)				

Sr. No.	Reference to Bidding Document	Clarification Sought by the Bidders	DFCC's Response				
(1)	(2)	(3)	(4)				
		description under column 1 as under: "Major Items of Materials, Equipment or Services "					
265.	<p>Section IV Bidding Forms. Form-SUP</p> <table border="1" data-bbox="264 507 741 595"> <tr> <td data-bbox="264 507 387 595">Major Items of Materials, Equipment or Services to be subcontracted</td> <td data-bbox="387 507 521 595">Proposed Subcontractor, Supplier, or Service Provider</td> <td data-bbox="521 507 616 595">Nationality/ Location of the subcontractor, supplier or service provider</td> <td data-bbox="616 507 741 595">Approximate Value of proposed Subcontracting Items (in percentage of the approximate total value of the Contract)</td> </tr> </table> <p>In Last column of the above table the bidders are requested to provide "Approximate Value of proposed Subcontracting Items (in percentage of the approximate total value of the Contract)".</p>	Major Items of Materials, Equipment or Services to be subcontracted	Proposed Subcontractor, Supplier, or Service Provider	Nationality/ Location of the subcontractor, supplier or service provider	Approximate Value of proposed Subcontracting Items (in percentage of the approximate total value of the Contract)	<p>The requested values under the last column attract certain details of financial proposal and will indicate break up % of various supply items.</p> <p>1) Since this being a Technical Proposal it is requested to delete this requirement as a part of Form-SUP.</p> <p>2) Alternatively if these details are felt mandatory, it is suggested to delete the submission of Form-SUP along with Technical Proposal and include it as a part of Financial Proposal.</p>	<p>Provisions in the Bidding Document are self-explanatory and shall prevail.</p>
Major Items of Materials, Equipment or Services to be subcontracted	Proposed Subcontractor, Supplier, or Service Provider	Nationality/ Location of the subcontractor, supplier or service provider	Approximate Value of proposed Subcontracting Items (in percentage of the approximate total value of the Contract)				
266.	<p>Part-2, Section- VI, Vol. 2, Page No. 428 of 887, Clause: 5.5.1</p> <p>For Traction Power Simulation consider stoppage of trains at alternate stations</p>	<p>As per the clause, we assume an operating scenario with train run with a stoppage at alternate stations & maximum dwell time of 3 mins and wind speed of 0.5m/s is to be considered. Since the description is not conclusive, multiple scenarios can be assumed by the bidder.</p> <p>Traction power simulation shall be the basis of system design and therefore the boundary conditions for the same shall be clearly defined.</p> <p>For the above description, as considered in EMP4 Contracts, we have now considered the following operation scenario:</p> <ol style="list-style-type: none"> 1. 50% of the Train will have a stoppage at every 30 KM. 2. Odd numbered trains (1, 3, 5...) stopping at 30km, 90km, 150km & so on. And Even numbered trains (2, 4, 6...) stopping at 60km, 120km, 180 km & so on. 	<p>Please refer sub clause 3.7.2, 6.2.4, 7.44 and else where specified in the bidding document for various Scenario.</p> <p>Provisions in the Bidding Document are self-explanatory and shall prevail.</p>				

Sr. No.	Reference to Bidding Document	Clarification Sought by the Bidders	DFCC's Response
(1)	(2)	(3)	(4)
		Please confirm that the operating scenario considered by us is in line with the tender requirements indicating the actual average distance between stations. The above understanding is attached as separate appendix showing the pattern of train operation for your reference.	
267.	Part 2, Section VI, Vol 2, Page No. 433 of 887, Clause: 6.3 All the Earth mat joints shall be exothermic as per the requirements of IEEE80:2013.	As per the normal practice of IR and also as followed in other DFCC Projects, the earth mat joints have been done by gas welding. As such, exothermic welding at all Joints will unnecessarily increase the Project cost and also are not required from technical Point of view. So, we request you to change the requirement under this clause from exothermic welding to gas welding.	Provisions in the Bidding Document are self-explanatory and shall prevail.
268.	Part 2, Section VI, Vol 2, Page No. 475 of 887, Clause: 8.21.3 The buried rail shall also be connected by means of at least four separate distinct connections made with steel armoured PVC insulated cables of adequate size to the traction rails.	Normally in Indian Railway & other DFCC Project, we are giving the connection AT neutral to earth through 75X8 mm GI Flat. Kindly confirm whether we can use GI Flat for this project also.	Provisions in the Bidding Document shall prevail.
269.	Part 2, Section VI, Vol 3, Page No. 719 of 887, Clause: 4.6.1 General	In particular specification clause no: 4.6.1, Chainages of IMD & IMSD's has been given same as the center line of station chainages. We request you to provide the distance of IMD & IMSD's from center of the stations.	The Indicative Yard plans identifying the locations of IMDs and IMSDs are already included in the Part 4 Reference documents. Please refer Sub clause 3.3.1 at Page 704 of 887 also. Provisions in the Bidding Document are self-explanatory and shall prevail.
270.	Part 2, Section VI, Vol 2	In the ESP provided along with the tender, the lines for	Please Refer Addendum No. 05, Sr.

Sr. No.	Reference to Bidding Document	Clarification Sought by the Bidders	DFCC's Response
(1)	(2)	(3)	(4)
	General	tower wagon sidings and machine sidings are being shown. Please confirm whether electrification for tower wagon sidings and machine sidings will also be under the scope CP 204 contract.	No. 49 also.
271.	RCPL/DFCCIL/EC/SEC-2/PP/05-31 ESP	Please confirm the total number of SSP's in the section, In ESP at chainage 142788, it is being shown as proposed SSP land and the same has not been mentioned in particular specification.	Part4 Reference Document includes indicative Drawings. Please refer Table 7.1.3 at page 446 of 887.
272.	Part 2, Section VI, Volume 3, Particular Specifications CI no 17.1 (2) and Drg. No. - GC/DFCC/ASS/50 Metering room	As per volume - 3 PS CI no. 17.1 (2), metering room is required at station and depot locations, but as per Drg No. GC/DFCC/ASS/50 provision for metering room is not provided. Please provide the same.	The Drawing referred Drawing is Indicative. Construction of Metering room is within the scope of the Contractor CP-204 as specified in Sub clause 3.2.3 at Page 703 of 887.
273.	Drg. No. -GC/DFCC/ASS/50 Auxiliary substation and additional DG room at station & depot	The elevation of auxiliary substation and additional DG room at station & depot is not mentioned in drawing. Please confirm if we can follow the standards practiced in Indian Railways for building works.	The Referred Drawing is Indicative. Please refer Sub clause 4.5 at page 717 of 887 and chapter 17 at page 790 of 887. Being a Design - Build contract, General/ functional/ performance requirements have been specified. The responsibility of detailed design rests in the scope of the contractor. Provisions in the Bidding Document are self-explanatory and shall prevail.

Sr. No.	Reference to Bidding Document	Clarification Sought by the Bidders	DFCC's Response
(1)	(2)	(3)	(4)
274.	<p>Part 2, Section VI, Volume 2, Particular Specifications (Chapter 7)</p> <p>Tower Wagon shed And Auxiliary substation and additional DG room at station & depot</p>	<p>The number of tower wagon shed and auxiliary substation & additional DG room is not mentioned. Please provide the same.</p>	<p>Being a Design - Build contract, General/ functional/ performance requirements have been specified. The responsibility of detailed design rests in the scope of the contractor.</p> <p>The locations of Tower wagon shed are shown in Part 4 Reference document. Please refer addendum 05 Sr. No. 49 also.</p> <p>The location of Auxiliary substation and addition DG room as required shall be constructed by the Contractor. Please refer Sub clause 3.2.3(1) at page 703 of 887.</p> <p>Provisions in the Bidding Document are self-explanatory and shall prevail.</p>
275.	<p>Part 2, Section VI, Volume 3, Particular Specifications CI no 17.21</p> <p>Acid resistant tiles</p>	<p>As per CI no 17.21 it is mentioned that the acid resistant tiles shall be provided. But up to what height from Finished floor level is not mentioned.</p> <p>Please clarify.</p>	<p>Being a Design - Build contract, General/ functional/ performance requirements have been specified. The responsibility of detailed design rests in the scope of the contractor.</p> <p>Provisions in the Bidding Document are self-explanatory and shall prevail.</p>