## **Dedicated Freight Corridor Corporation of India Limited**

(A Government of India Enterprise)

DESIGN AND CONSTRUCTION OF SIGNAL AND TELECOM WORKS FOR DOUBLE LINE RAILWAY INVOLVING TRAIN DETECTION SYSTEM, ELECTRONIC INTERLOCKING IN STATIONS, AUTOMATIC SIGNALLING IN BLOCK SECTIONS, TRAIN MONITORING & DIAGNOSTIC SYSTEM, INTERLOCKING OF LEVEL CROSSING GATES, DISPATCH TELEPHONE SYSTEM, FIBER OPTIC COMMUNICATION SYSTEM, GSM(R) SYSTEM, DIGITAL ELECTRONIC EXCHANGE SYSTEM, MASTER CLOCK SYSTEM AND VIDEO SURVEILLANCE SYSTEM FOR REWARI – MAKARPURA SECTION INCLUDING TESTING AND COMMISSIONING ON DESIGN-BUILD LUMP SUM PRICE BASIS OF WESTERN DEDICATED FREIGHTCORRIDOR

## SIGNALLING AND TELECOMMUNICATION WORKS CONTRACT (Rewari – Makarpura of Phase 1)

## **CONTRACT PACKAGE ST P-5**

## **Queries from Bidders**

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492.	III part 6	10 1.4.7.1 We refer to SI.377 of DFCCIL Response to Queries from Bidders Part-5, which describes as hereunder	No manufacturer can separate their standard hot stand-by 1x (1+1) MSS system into 2 x (1+0) system for future sift of one of 1x (1+0)	The Clause has been suitably modified. Referitem No. 442 of Addm-9.			
					ThehotstandbyMSSpr ovided forinclause6.5.1.3 page 59 shouldbeprovidedinO CC. Thedesign, construction and the installation of the (1+1) systemshouldbesodo nein OCC that on a later date, if DFCC decides, it should be	system to BCC, in design, construction and installation.  Under the above situation, please confirm that the bidder shall provide only 1x(1+1) configuration system for OCC per Clause 6.5.1.3 and that the geographical stand-by unit in BCC will be	

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					possible to shift the standby partofthesystemtoanot herlocation ieBCC and operate as(1+1) without much problemand requirement of additional equipment. Whenshifted the two corenet works should supporthots tand by mode and automatics witch over function. When one MSS is down, the other should switch over automaticall yandwork the full GSM-Rnetwork.	provided by Others under (1+ 1) configuration.	
493.	Vol. III Part 1				Cross Acceptance of Signaling Equipment	Please refer to the query no. 10 raised by us on 19-03-2014. Further to thatwe request you to clarify the following: - As you are aware, the equipments under the STEP component are to be sourced from a single supplier viz.  1. EI and TMS from Kyosan. 2. MSDAC from Nippon Signal. This being the case, please clarify that the	Obtaining Cross Acceptance approval from RDSO is one of the activities to be included in Works Programme to be submitted by the Contractor as per Clause 7.5.5.3(iii). As such, responsibility for timely completion of this activity lies fully with the Contractor. Further, responsibility of the Contractor in this matter is also governed by FIDIC Clause No. 4.4.

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494.	III Part 1	Annexure: 7-6			Interface Issues between ST P-5 and ST P-5A	contractor will not be held any responsible in case of delay of obtaining the RDSO cross acceptance for these vendors, the Engineer shall take such delay into account in determining any extension of time for completion to which the Contractor is entitled under the Contract and DFCCIL shall actively participate in procuring the cross acceptance.  No interface between TMS and LEU of TPWS is defined, though the interface between EI and LEU is clearly defined. Since LEU is vital and safety approved equipment, LEU cannot change the interface toward TMS. So that TMS shall be made to receive the LEU status data. Interface between LEU and TMS should be 100Base-FX. We request to define clearly the TMS interface toward LEU in Annexure 7-6 for bidder to design and quote P-5	However DFCCIL shall help in obtaining of RDSO cross acceptance by concerned vendors and facilitate expeditious approval for various items.  Such details are part of the interface to be worked out between the relevant Contractors.

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						system correctly.	
495.	Not used						
496.	Not used						
497.	3 (1/2)	5	26 of 87	5.5.1.17	Health and condition monitoring of Point machines.	The tender asks for health and Condition monitoring of all equipment including point machines. Kindly clarify whether separate monitoring equipment for monitoring point machines is required?	Yes.
498.	3 (1/2)	Annexure 8	1 of 4	1.1	Pre-fabricated structures shall be of steel construction	What is the kind of material to be used for fabrication of huts? Kindly specify	The Clause is self explanatory.
499.	Not used					, , , , , ,	
500.	3	5	18 of 87	5.1 (1)	Multi Aspect Colour Light signals	Kindly provide the type of aspect required in loop lines.	Refer typical Signalling Plan provided in Vol. V of Bid documents.
501.	3	1	4 of 87	1.4.3	OCC	We understand that the live indications of various statuses will be available in OCC and the same will be controlled locally at each station and not at OCC.  Please confirm.	Refer Clause 1.4.3 of Vol. III Part 1 and Clause 3 of Annexure 2 of Vol. III Part 1.
502.	I Part 1	3	Form I- B-7	6.2 (vii)	Information for justifying the	We intend to make this submission in the	All information considered relevant

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			Page 122		provenness of the proposed equipment.	attached format. Kindly confirm acceptance.	should be submitted.
503.	I Part 1	3	Form I- B-7 Page 123	6.2 (xi)	The contractor shall submit user acceptance certificates for similar works completed by the Bidder.	We intend to make this submission in the attached format. Kindly confirm acceptance.	All information considered relevant should be submitted.
504.	Part 1	3	Form I- B-7 Page 120	2 (d) & 2 (e)	d) TheBiddershallsubmit Clausewisecomplianc etotheGeneralConditi onsof Contract (GCC)asincludedin the Bid Documents.  e) TheBiddershallsubmit Clausewisecomplianc etotheParticularCondi tionsof Contract (PCC)asincludedin the Bid Documents.	TheGeneralConditions and Particular conditionsgoverningthis Contractarethe "Conditions onsofContractforPlanta nd DesignBuildforElectrica landMechanicalPlant, a ndforBuildingandEngin eeringWorks, Designed bytheContractorFirst Edition1999, preparedby the FédérationInternational edesIngénieurs-Conseils(FIDIC) (in ref. to Vol. I — Part 1, Section-5, page no. 139 to 173).  Do we need to submit clause by compliance for entire FIDIC	Please refer to the item 432 of Addendum No. 9, wherein the requirement of clause wise compliance of GCC and PCC has been deleted.

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						specifications or only for Part II: Part A: Appendix to Bid (Pg. no. 140 to 150) and Part II: Part B-Particular Conditions (PC) (Pg no. 151 to 173)? Kindly clarify.	
505.	l Part 1	3	Form I- B-7 Page 124	6.5 (i)	Statement of Maintainability	It shall be very difficult for a bidder to submit this form at the bidding stage. In its place, please allow is to submit a DLP support methodology. The statement of Maintainability can be submitted during execution. Kindly accept.	Please refer to the SI.  No. 433 of Addendum  No. 9, wherein the requirement of  "Statement of  Maintainability" has been deleted.
506.	Part 1	3	Page 130	Form I-B-10	Transfer of Technology (TOT) Signal and Telecommunication System	We understand that Technology transfer as stated in the RDSO Cross acceptance criteria and requirements stated in Form I-B 10 are relevant only for EI and MS DAC alone. Accordingly, we shall submit the documents under 1.1, 1.2, 1.3, 1.4, 1.5 and 1.7 for EI and MSDAC	Refer second sentence of first para of form I-B-10.

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						systems alone. Kindly confirm.  We shall however submit documents under 1.6 and 2.1 (Training related) for all the signaling & telecommunication systems as per the requirements of Vol. III – Particular Specifications. Kindly confirm that our understanding is correct.	
507.	3 part1	9	31 of 87 5 of 35	5.10 Schedule	Power Supply System (PSS)	Please clarify whether a contractor has to provide an IPS as per	PSS shall meet Employer's Requirements under
	1 part 2	O	5 01 35	5.3.3 & 5.4.3	Installation of UPS at Stations and Autolocation Huts	·	Clause 5.10.
508.	3 part 1	9	32 of 87	5.10.9	PSS shall have inbuilt redundancy.	Further to the query above, please confirm that in this case inbuilt redundancy refers to the redundant module provided in N+1 configuration for all modular convertors, except transformers and batteries and that no additional redundant system is required. Please confirm.	Clause 5.10 does not provide any such exception to redundancy.
509.	3 part 1	5	32 of 87	5.10.10	Power Supply system shall keep supplying power at full	Please confirm that the load will be same as during the Signal	The Clause is self explanatory.

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					connected load at least for 4 hours during feeding power failure with at least 20% spare capacity.	Operations using AT.	
510.	3 part 1	5	32 of 87	5.10.13	All power supply equipment e.g. transformers, DC-DC converters, Chargers etc. shall have one standby equipment with changeover facility.	Please confirm that here redundancy refers to the redundant module provided in N+1 configuration for all modular convertors, except transformer and battery.  Please amend the clause accordingly.	Refer response to Query No.508.
511.	Vol. 3 part 2	section 6: GSM-R	38	6.3.1.1	System Services	No manufacturer of GSM-R terminals supports the EIRENE-compliantversion of Direct Mode of Operation. One manufacturer supports a version of DMO at 450 MHz, but this frequency is not allowed in the current EIRENE version. Could DFCCIL consider removing the requirement for support or DMO, or alternatively, specify whether non-EIRENE compliant versions of this DMO function are permitted?	Please refer to the SI.  Nos. 439, 441& 444 of  Addendum No. 9 in  which requirement for  DMO has been  deleted.
512.	Vol. 3 part 2	section 6: GSM-R	56	6.3.9.1	Mobile Equipment	Could DFCCIL please clarify whether GPH and OPH are required, and if	Please refer to clause 6.5.1.8 and response to query No 464.

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						they are, could DFFCIL please specify the required quantities of OPH/GPH?	
513.	Vol. 3 part 2	section 6: GSM-R	58	6.5.1.1.	Technical Requirements	Are these HLRs to be supplied by the Contractor as part of the ST P5 project, or will the MSS connect to existing HLRs?	Clause is self explanatory.
514.	Vol. 3 part 2	section 6: GSM-R	59	6.5.1.3	Technical Requirements	Should the HLR to be supplied by the Contractor be also provided with a hot standby unit, or is this clause applicable to the mobile switching subsystem (i.e. MSC server and MGW) alone?	Referred clause is not relevant to HLR. However, refer to S. No. 442 of Addendum No. 9 for no requirements of hot standby.
515.	Vol. 3 part 2	section 6: GSM-R	66	6.6.2	System Expansion	Does this requirement mean that the capacity of each CER equipment delivered in STP-5 should be equal to 2.7 times (2.7=150% x 180%) the capacity strictly needed to cover phase 1 needs?	Clause is self explanatory.
516.	Vol. 3 part 2	section 6: GSM-R	55 of 128	6.3.13.3	Coverage and performance	Since a dedicated indoor coverage system must be designed to meet this requirement, what is the number of rooms in each of the buildings to be covered?	Clause is self explanatory.
517.	III Part 2	9	30 of 128	5.4.3.9 new subclause	Availability of Networkingsystem	Recovery from Network Failures should be 50 m sec as per today's	Refer to S. No. 452 of Addendum No. 9 in which Recovery from

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						technology. Please amend the clause accordingly.	Network Failures has been modified to 50 m sec.
518.	Vol III, Part 2	9	20 of 128	5.1.5	OFC Communication System requirements	We understand that Data Networking System (WAN) is required in OCC, Stations and ELMD only.Pleaseclarify.	For complete requirements of networking systems please refer to clauses 5.3.6 and its sub-clauses, 5.5.3.5 and its sub-clauses and other relevant clauses of chapter 5.
519.	Vol III, Part 2	9	27 of 128	5.3.10.1.1	Network Management System – System Configuration	Can we offer inbuilt storage software in the NMS Server Hardware.	Clause 5.3.10.1.6 is self explanatory. Contractor shall provide mass storage device subject to No Objection by the Engineer.
520.	Vol III, Part 2	9	27 of 128	5.3.10.1.10	Network Management System – System Configuration	We understand that ST-5 NMS for SDH will be common with RS-7. We need to know nos. of devices/ports of RS-7 equipment.  Do we need to provide separate NMS for ELMD? Please clarify as this will have a cost implication.	Clause is self explanatory. Separate NMS for ELMD is not required. For details of SDH node for ELMD refer to clause 5.3.4.2 and details against S No. 10(b) of Appendix 9-2.
521.	Vol III, Part 2	9	35 of 128	5.5.3.5.1.12	Layer 3 switches - WAN	We understand that chassis base switch with Redundant Supervisor / Switching Fabric / Management Modules / Power Supplies are required in distribution level i.e. OCC Stations,	Clause is self explanatory. Contractor shall design the system subject to No Objection by the Engineer. Equipment for ELMD

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						ELMD, IMD, IMSD. Please confirm.	is not in the scope of ST P-5, refer clause 2.1.2 and other relevant clauses of chapter 5 and Appendix 9-2.
522.	Vol III, Part 2	9	36 of 128	5.5.3.6.7	Layer 3 switches - WAN	Can we offer common portable terminal for SDH & WAN?	Yes.
523.	Vol III, Part 2	9	36 of 128	5.6.2	System Expansion	Do we need to provide two (one in Depot and one in Makarpura) extra SDH equipement with our Phase-I offer to connect with Phase II? Please confirm.	Clause is self explanatory. Contractor shall design the system subject to No Objection by the Engineer.
524.	Vol III, Part 2	9	112 of 128	15.7.4.4.1	Earthing of outdoor installation	Can we use adequate lower gauge copper conductor to earth individual item like video camera, clock, access switch etc.  Because 16 Sq mm copper conductor used to earth whole telecom housing rack.  Please confirm.	No change in the requirements.
525.	Vol III, Part 2	9	71 of 128	7.5.1.3	Technical Requirements of EPABX Switch Network	As per drawing do we need provide EPABX with 12 E1 at OCC and 4E1 at Stations where OCC is directly connected? Please confirm.	Your understanding of the drawing no. NKC- S&T-SSD-AL-20009 (VERSION –B) is not correct. Please read the requirement of E1s between EPABXs as shown by Bold lines. Contractor shall design the system to

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							meet with the requirements subject to No Objection by the Engineer.
526.	3 (1/2)	9	31 of 87	5.10	Power Supply System (PSS)	Please clarify whether or not the PSS equipment need to cater to the	Refer response to Query No.545.
	3 (2/2)	9	91 of 128	11.1	General	GSM-R load at any of the locations (Stations, OCC, Auto-location Huts, etc.)	
527.					General	In the event of RS-7 contract not getting finalized on time to commission the project as per the given milestones, will the ST P5 contractor be required to provide & retrofit the onboard equipment for locomotives available with IR.	There is no plan to provide & retrofit the onboard equipment for locomotives available with IR.
528.	Not used.					-	
529.	3 (1/2)	9 (Annex ure 7.6)	Pg. 4 of 7	1.5 (vii)	Fiber requirement of TPWS and battery limits with regards to termination	Please refer to the response given to query no. 404 in Set 7. In this regard, please indicate the dark fibers to be allocated for TPWS equipment and clearly chart out the battery limits between ST P5 and ST P5A contracts. We would like to emphasise that this	These details shall be determined during interface at design stage by the relevant Contractors.

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520	I Port			Schodulo	Schodulo 5	information is required in the prebid stage itself as this will have an cost implication.	Itom wise response
530.	I – Part (2 of 2)	6	1 to 35	Schedule 5.1 – Schedule 5.16	Schedule 5 – Payment Schedule	Please refer to your response to SI. No. 489 of Set 7. In this regard, please clarify the following: -  1. Works pertaining to interface with IR at each Jn. Station: - The payment schedule 5.3 is sub categorized equipment wise (5.3.1 – EI at stations, 5.3.2 – MS DAC at stations, etc.). In such case, please identify the particular sub cost center which is deemed to accommodate the interface with IR stations.  2. GSM (R) On board equipment. – Currently, the onboard equipment is a part of Schedule 5.9.1 which also accommodates BTS, RDW, Radio handportable sets and other equipment.	Item wise response is as under:  (1) DFC Junction station layout includes link line to IR station and therefore, signaling equipment provision (including for link lines) at such stations is already included in the relevant cost centers.  (2) Payment Schedule 5.9.1 has been suitably modified. Refer item No. 435 of Addm-9.

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						The payment procedure reads "Payment shall be on per BTS location basis". In this case, at execution stage, it is not clear how separate payment will be made for wayside and On-board equipment. Hence, we once again request you to provide a separate cost center for wayside and on-board GSM-R equipment.	
531.	1(1/2)	2	57 of 191	3.2(e) (iii)	c(ii). Installation, Testing and commissioning of Electronic Interlocking system to Railways / Metro Railways / Monorails – 6 stations in any one year in last ten years. d. TrainManagement and diagnostic System(TMS) orCentralized TrafficControlSystem (CTC) toRailways/MetroRail way/Monorails – 1	Please refer Response to queries – set 7 SI. No 490 & 491.  We would like to bring to your kind notice the fact that the Japanese vendors shortlisted for this project have only Supply, testing & commissioning experience. We were informed that in their contracts, installation works are not a part of the scope and are dealt with separately.  As the vendors for this project are predefined,	No change is envisaged.

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					system in any one year in last ten years. e. Digital Axle Counter to Railways / Metro Railway / Monorails – 18.4 R km consisting of block section and station in any one year in last ten years.	please modify the eligibility criteria by deleting the word "installation".	
532.	1(1/2)	3	123 of 191	6.3 (vi)	RDSO Cross Acceptance Procedure for Signalling.	Please confirm that RDSO cross acceptance is not applicable for TMS.	Confirmed.
533.	3 (1/2)				RDSO Cross Acceptance of GSM-R	Please confirm that RDSO cross acceptance is not applicable for GSM-R systems.	Refer Clause 1.3.10 of Vol.III Part 1 of Bid documents.
534.	Gen				BuildingLayout of OCC	In continuation to your response to query no. 446 in Set 7, we request you to provide a layout for the OCC building just like you have provided a station building layout for junction stations in drawings no. V-4-2-7 in Vol. V. This will help us in estimating the length of indoor cables and plan the equipment spacing which is required to be submitted as per clause 6.2 (ix) of Form I-B-7.	Response given to Query No. 446 is complete and no change in the same is envisaged.
535.	III –	9	21 of	5.3.3.1.2	Optical fibercables of	This is in continuation to	At this stage no extra

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Part 2		128		the first networkshallbetermina ted in ODFs in Central Equipment Room (CER) at OCC, TERs at stations and TER at the Electric Locomotive depot andany other locations asrequired.	your response to query no. 468 in Set 7. Kindly note that extra terminations will have a cost implication hence, we once again request you to delete the words "and any other locations as required" from the end of the sentence.	terminations are envisaged however if contractor's design requires extra terminations the same shall be provided by the contractor subject to No Objection by the Engineer.
536. 1 (1/2)	1	17	17.1	Documents Establishing the Qualification of the Bidder	Please refer to your response to Query no. 74 in Set 1. We would like to meet certain eligibility criterion by submitting credentials of multiple Specialist Subcontractors who are able to meet the tender requirements individually. This is to ensure that there is no monopoly of vendors during execution. Please confirm acceptance.	It was clarified in the response to Q. No. 74 that: "The requirement of each of the key activities of sub-factor 3.2(e)(iii) are required to be met either by all partners combined or can be a specialist sub-contractor (not more than one) for each of the key activity.  Both the requirements under sub-factor 3.2(e)(iv) - Specific Design Experience are required to be met either by all partners combined or can be a specialist sub-design consultant sub-system-wise."

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							Technical Bid, if a
							bidder proposes more than one Specialist
							Sub-contractor/
							Design Consultant
							against any key
							activity, they will be
							evaluated individually.
							Subsequently, among
							the Specialist Sub- contractors/ Design
							contractors/ Design Consultants evaluated
							as "Individually
							Passed" for that
							particular activity, the
							successful bidder will
							have to declare his
							single finalized
							Specialist Sub- contractor/ Design
							Consultant for that
							activity, before signing
							of the Contract
							Agreement with the
							Employer. An
							undertaking in this
							regard duly signed by the Authorised
							Representative is
							required to be
							submitted by the
							Bidder along with his
							Letter of Technical
							Bid.
537.	3 (1/2)	Annexure	9 of 13	7.6	Interfacing of TMS	We understand CMS as	Item wise response is

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		1	NO.		with Crew Management System(CMS)	follows. Kindly confirm our understanding is correct or not. a. Online interface with the existing CMS of IR is not required. b. Crew data managed by the existing CMS is provided at the time of basic design for WDFC. Necessary data only is extracted and used in CMS of WDFC.In this context, please define the necessary data and the size of data. c. New crew data is added manually. d. Crew Controller enters "Crew booking" and "Sign on/off" into the system manually. e. Crews' running time and distance are recorded and reported for the running allowances. f. DFCCIL Crew Management system is an offline system.	as under:  a. No such interface envisaged at present.  b. to e. Will be decided at design stage.  f. Employer's Requirements as per Clause 1.4.5 of Vol.III Part 1 of Bid documents and last bullet of Clause 1.5 of Annexure 7-4 shall be met.
538.	3 (1/2)	Annexure 2	29 of 44	10.4 B. 12.	The Window for dispatching special train shall have the	We understand FOIS as follows. Kindly confirm our understanding is	Refer bullet No. 8 of Clause 1.5 of Annexure 7-4 which is

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					following	correct or not. a. Online interface with the existing FOIS of IR is necessary. b. The purpose of online interface is to get information such as train ID, types of freight trains, etc. required for the operation of WDFC. c. There is no information to be provided by TMS of WDFC to FOIS online.	self explanatory. Details shall be determined during interface at design stage.
539.	3 (1/2)	Annexure 2	30 of 44	10.5	Terminals with ELMD & Lobbies	We understand ELMD Terminal as follows. Kindly confirm our understanding is correct or not. a. ELMD Terminal is placed at ELMD. b. Failure information of locomotive is entered manually to ELMD Terminal and displayed at OCC Terminal. c. Operating information of WDFC is displayed at ELMD Terminal. However, its content is a part of the thing that TMS provides at OCC,	Item wise response is as under:  a. Confirmed. b. Method of transfer of failure information of locomotives to TMS shall be determined during interface at design stage by the relevant Contractors. c. Contents of failure information required for TMS shall be determined during interface at design stage by the relevant

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		NO.	NO.			and there is no additional information for ELMD.	Contractors.
540.	3 (1/2)	Annexure 1	9 of 13	7.7 (vii)	The time table preparation module shall have following features	We understand Train Schedule as follows. Kindly confirm our understanding is correct or not.  a. Most of the trains running on WDFC network come from IR or go out to IR.  b. TMS can create and edit only Train Schedule in WDFC manually.  c. Train Schedule is created and edited at OCC Terminals or ASM Terminal at Junction Station.	Item wise response is as under:  a. In addition to IR, train runs to/from cement sidings, ICDs, Multi Modal Logistic Parks (refer Clause 3.5(4) of Annexure-6) etc. shall also be there. b. Confirmed. c. Time Table preparation/ editing shall be done only in OCC as it is a Off-line module. Refer Clause 7.7(ii) of Annexure-1.
541.	3 (1/2)	Annexure 2	35 of 44	11.3	Software – Train Describer System	We understand TrainID as follows. Kindly confirm our understanding is correct or not.  a. Train ID in WDFC is allowed to be given individually to the trains coming from IR or going out to IR.  b. Train ID is entered at OCC Terminals or ASM Terminal at Junction Station.	Item wise response is as under:  a. Confirmed. b. Refer Clause 11.3(iv) of Annexure-2.

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542.	3 (1/2)	Annexure 2	40 of 44	11.11.2 (vi)	TMS - Decision Support	Decision support is included as part of software development. But the application and functional requirements of Decision support are not clearly mentioned. Please clarify this and furnish the detailed requirements of Decision support system.	Decision support is not envisaged as a separate application. It is part of software development to meet Employer's Requirements pertaining to TMS.
543.	Not used	•	1		1		
544.	Not used					,	
545.	III Part 1	9	29	5.10.1	Power Supply System	It is mentioned in clause no. 5.10.1 of volIII part 1 that "PSS shall cater to combined S&T equipment loads at stations and OCC", whereas clause no. 11.3.1 of VolIII part 2 callsfor two 48V SMPS chargers withindividual 48V battery bank.  We understand that combined PSS for S&T system at stations will feed the telecom equipments other than those fed by 48V DC power supply system provided as per clause no. 11.3.1 of VolIII part	Confirmed.

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						Please confim our understanding.	
546.	V	11	V-3-3-4		Reference drawings of yards	We refer to Item No. 5 of drawing no. V-3-3-4 wherein connection between Chadotar station of DFC and Kutch Railway Line is shown.  Please provide details of this link line including length of link line, location of junction station on IR line to enable the bidder to propose system of working and calculate cable lengths between Chadotar DFC station and concerned IR station.	Tentatively, length of connecting line between Chadotar station of DFC and Kutch Railway Line may be taken as 150 meters.
547.	III Part 1	9	Annexur e 7-3, page 6	4.19	Interface issues between ST P-5 and civil works contractor	Interface for false floor is not mentioned in annexure 7-3 of volIII part 1. We understand that provision of False floor in TMS equipment room and operations room of OCC building is the scope of civil works contractor. Please confirm our understanding.	Provision of false floor in OCC building will be done byCivilWorksContract or.Details shall be worked out through interface between Civil &system Contractors at OCC building design stage.

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548.	Not use	ed.					
549.	III Part 1	9	3	1.3.8	Connections to IR and Sidings	We refer to clause 1.3.8 of volIII part 1 duly modified vide item no. 394 of Addendum No. 8. Wherein it is mentionedthat "for longertrack lengths, Absolute Block working using Solid State BlockProving by Axle Counter (DIGITAL) as per RDSO specificationNo. RDSO/SPN/175 shall be provided.	has been made in the Clause. Refer item
						Whereas a new specification IRS:S-105 for Block Proving by Axle Counter using UFSBI has been added vide item no. 394 of addendum 8.  Please confirm which specification need to be	
						followed for block instruments on IR link lines of length 4 Km. and above.	
550.	III Part 1	9	35 of annexur e-2	11.2 (v) (f) of annexure-2	Hot Axle Detector Alarm	Please provide the number of hot axle detectors to be provided by PE-6 contractor and number of potential free	of one No. each Hot Axle Detector on main line approach tracks

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		NO.	NO.			contact in each hot axle detector that are required to be monitored by TMS.	be considered along with one pair each of potential free contacts. Exact quantity shall be worked out through interface between relevant Contractors at design stage.
551.	III Part 1	9	28	5.7.5	Block Sections	Referring to clause 5.7.5 of volIII part 1 amended vide item no. 355 of addendum 6, we understand that maximum distance between Auto Location huts in block section is 6 km. Please confirm.	To be designed by the Contractor keeping in view Employer's Requirements (especially Clause 5.7.5 and 5.7.7) and provisions of SEM.
552.	III Part 1	9	11	3.2.5	Design criteria	Trackside installation of LEUs was permitted vide item no. 46 of addendum 2 ifrequired by design subject to consent by the Engineer at detailed Design stage.  We request you to restrict the trackside installation of LEU in stations only. All the LEUs in block section to be provided inside ALH due to maintenance and reliability issues.	No change envisaged.
553.	III Part 1	Annex.7-4 VolIII	2	1.5	Interface issues between Indian	Please clarify what kind of data of train runs	These details shall be worked out at design

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		Part 1			Railways &ST P-5	DFCCIL is expecting to exchange with FOIS of IR. Bidder can provide MIS report information for FOIS. Please confirm if this is acceptable to DFCCIL.	stage.
554.	III part 2	6	25	5.3.6.11.4	LAN Spare Ports (SI. No. 311 of Addendum 4A)	Please confirm that the specified spare ports quantities of 50% are calculated based on "no. of installed ports (occupied ports)", not "maximum no. of ports available to selected switch", considering the following two points;  (1) The figure of 50% is very high comparing with 20% specified for cable core or El I/O for signalling.  (2) If it is to be calculated based on "maximum no. ports available to the selected switch", the switch has to be a bigger model, which will invite the essential cost increase.	No change in the requirements.

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555.	III Part 2	6	40	6.3.4.4 Appendix 9- 2 Item 9(h)	Loco Motive Diagnostics data transmission OCC/DCC  -Ditto-	Please confirm that Loco diagnostic data transmissionis to DCC only, as described in the column of RS P-7 Contractor Role in item 9(h) of Appendix 9-2.	Clause is self explanatory. All work including any equipment at DCC end in ELMD will be the responsibility of RS P-7, while the work in OCC will be the responsibility of ST P-5.
556.	III Part 1 III Part 1	6 Annex-1 6 Annex-2	13 40	11	TMS Integration with Train Radio CommSystem -Ditto	Automatic registration of Mobile Radio for Train ID/Load File is outside of EIRENE FRS/SRS. The registration of Train ID to on board radio or load file to ETCS on board equipment (future provision) is to be	Respective Clauses of Annex-1 and Annex-2 have been suitably amended. Refer item No. 450 & 451 of Addm-9.
						manually input by the driver, and the potential vendors have had no such auto registration experiences. Please confirm that this requirement will not be applicable to DFC project.	
557.	II	8 Appendix- 12	2	3.1	Maintaining temporary facilities for the Contractor's use until the issue of	Please confirm that "Taking Over" defined in these clauses are referring only to the	1)Regarding Clause 3.1, it shall be the responsibility of the Contractor to
	II	8 Appendix-	5	5.1	Taking Over  Maintaining	contract sections of (i) & (ii) and not to the contract section of (iii),	maintain the facilities in good condition to ensure

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		12			temporary facilities for the use by Employer and Engineer until the issue of Taking Over	defined by Appendix to BID (Vol.1) as follows;  (i)Rewari– Iqbalgarh"section. (ii)Iqbalgarh– Makarupura"section. (iii) On Board Works on all 120 Locos of Phase-1 (338 Weeks)	proper execution of Works till taken over by the Employer.  2) Regarding Clause 5.1, temporary facilities for the use by the Employer and the Engineer shall be the property of the Employer after issue of Taking Over Certificate as per Clause 5.1.1. The Employer will decide at appropriate time whether any portion of these facilities are to be taken over by him after issue of Taking Over Certificate for part(s) of the Works.
558.	III Part 1	9	Annex- 1 Page 12	9.3 ii	Traffic related alarms for maintenance staff by SMS through GSM(R)	Please confirm that this provision of TMS integration function between TMS and GSM-(R) is not mandatory at this stage, because it is not called for any other part of the core clauses, i.e.	(i)This Functional Requirement is a part of the Employer's Requirements and therefore, shall be provided.  (ii) Groups of maintenance staff to be provided with

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						(1) Clause 11,"(TMS) INTEGRATION WITH TRAIN RADIO COMMUNICATION SYSTEM", page 13 of Annex-1, Vol. III Part 1.	SMS call shall be dealt with at Design stage.
						(2) Clause 12, "(TMS) INTEGRATION WITH GSM(R) BASED MOBILE TRAIN RADIO SYSTEM GSM", page 40 of Annex-1 (Vol. III Part 1)	
						(3) Any Clause of Sec.6 of Vol. III Part 2.	
						If it is to be provided at this stage, please indicate the pre-set group of maintenance staff organization for SMS call set up.	
559.	III Part 2	9	Appendi x Page 11	Appendix- 6	TOOLS AND TEST EQUIPMENT	Please confirm that it is not necessary to provide additional 20% to the quantities specified in Appendix -6.	Please refer to clause 17.1.3.1 of chapter 17 of vol. III Part 2 for spares and clause 17.2.2 of chapter 17 of
	II	8	129	27.1.1 (iii) & (iv)	Additional 20% spare quantity of tools and test equipment		vol. III Part 2for tools and test equipment, which are self

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							explanatory. Please note that the requirements given in appendices 5 & 6 are as a minimum.
560.	III Part 2	6	58	6.5.1.1 & 6.5.1.1(2) & Sr. no.405 under addendum no. 8	Mobile GSM	We understand that Railway board had issued notification (~Sept. 2012) to all Railways to migrate to new nationwide georedundant IN platforms (purchased under IRPMU) to avoid registration/deregistration by GSMR subscribers in PLMN boundaries/while physically crossing from one Railway to another. Hence, in case WDFC installs now another new IN system for the network, then above very requirement shall be defeated and not be able to met, as many of the DFCC routes are in parallel/common, being shared with Indian Railways network. Also, we feel that buying another set of IN	No further change is envisaged in the requirements of IN modified as per item No.405 of Addendum 8. For MSS, please refer response to query no.492.

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						platforms/Core to DFCC at this stage is not cost effective solution and also will complicate the GSMR nationwide network scenario. Hence we recommend to use the already planned geo-redundant IN/Core networks (of IRPMU) for GSMR networks of DFCC and Indian Railways for seamless operation of nationwide network. Please confirm.	
561.	3 part 1	9	3 of 87	1.3.8 As per Addendum - 8 SI. No; 391	Connections to IR and Sidings	Please clarify which type of block signaling equipment is to be provided for interface with IR and sidings, as there is difference	The Clause No. 1.3.8(a) has been suitably modified. Refer item No. 437 of Addm 9.
	3 part 1	9	30 of 87	5.7 (B) As per addendum – 8 SI. No: 422	Block Sections	between clause 1.3.8 (which talks about using SSBPAC (Digital) for distance more than 4 km) and clause 5.7 (B) (which talks about Block Provingby Axle Counter using UFSBI.).	
562.	3 part 1	9	31 of 87	5.8.4 (ii) As per addendum – 8 SI. No: 424	In addition, indication for the 'ON' and 'OFF' aspects of gate Signals (wherever provided), occupation/	In order to display the details pertaining to IR jurisdictionwe should get all necessary inputs from IR. As carrying out modifications in IR	These aspects have already been suitably covered in Annexure 7-4. Further details shall be worked out by respective Contractors

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563.	Not u				clearance of the controlling track circuits up to the point of approach warning and direction of movement of the trains on the IR track(s) shall also be displayed on the panel.	running circuit is sensitive and critical, we suggest that IR should make all the inputs required for DFCC available at a common location box, to be installed at the boundary of DFCC & IR so that the ST P5 contractor can take all necessary inputs from the Boundary Locations and also make available all necessary inputs required by IR, at the same location. IR should carry out all necessary modifications in their respective signalling circuits.  ST P5 contractor will lay cables only upto these Boundary Locations where interface with IR is involved.  Kindly elaborate clause no.1.2 of Annexure 7-4 of Volume 3 – part 1 to this effect.	during interface at design stage.
564.	3 part 1	9	3 of 87	1.3.8 – As	Interface with IR	In this connection we	Refer Clause 1.2 of
				per Addendum	Station and shifting of connection to existing	understand that, our work is limited to	Annexure 7-4.

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		TWO.		8 SI. No:	Sidings from IR to DFCC.	providing only slot / block working (slot working for distances less than 4 kms and Absolute Block working for distances longer than 4 Kms) for interface purpose. Modification in existing Signalling systems of IR and Siding will be carried out by the respective owners.  Please confirm whether our understanding is correct.	
565.	3 part 1	9	30 of 87	1.3.8	Connections to IR and Sidings	As per Addendum – 8 (Sl. No. 391), the interface connections to IR track and sidings from the DFCC track has to be provided with	(i) BPAC is not in the list of STEP components. (ii) DAC as a STEP item is meant for "Track Vacancy
	1 part 1	4	137 of 191	4.3	Eligibility for the Provision of Goods, Works and Services in JICA-Financed Procurement  Sources of	absolute block signaling using Axle Counters. The Axle Counters to be used for this application shall be Single Section Digital Axle Counters. Digital Axle Counters fall	Detection Equipment" whereas the purpose of SSDAC in BPAC is for Block Provingby Axle Counter& not as
	3 part 1	9	51 of 87	9.5 (2)	Equipment Supply	under the STEP category. This would mean that the contractor has to source the Axle Counters for this application from Nippon Signals as well.As per	Track Vacancy Detection Equipment. Its source of supply shall be included by the Bidder in details of "Countries of

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						the provisions of Clause 9.5 (2) of Vol. 3 – part 1 NS's DAC will have to be cross approved for BPAC / Single Section detection purposes. Considering the small value of this work and the time taken for the cross approval process we request you to modify clause 4.3 of Section 4 of ITT to state that only "Multi Section Digital Axle Counters" fall under STEP category.  Moreover, as per our experience, wherever interface is involved IR prefers to have the Axle counter system which is already in use in the particular section.	Origin" in form I-B-9 of Vol. I Part 1 of Bid documents. In view of above, no change is envisaged.
566.	3 part 1	9	Annexu re 2: 27 of 44	9.1	Power Supply Arrangement – Load of TMS	The PSS at OCC has to cater for Phase II TMS load along with the Phase I TMS and S&T loads. At this stage, the Bidder for ST-P5 contract does not have the load requirement details for Phase II TMS. In view of this, we request DFCCIL to	These details shall be determined during interface by respective Contractors at design stage.

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						provide the load requirement for Phase II TMS to enable the contractor to decide the optimum PSS rating at OCC.  Alternatively, please modify the clause suitably such that ST-P5 contractor shall provide PSS which need to cater Phase I Loads at OCC only.	
567.	3 part 1	9	26 of 87	5.5.1.16 – (2)	The Contractor shall ensure that the point machine installation and connection details are fully coordinated with the design of the track work.	We request DFCCIL to indicate the track design specifications and the type of turn-outs (Canted / Normal) being used in the track work to determine the type of Point machine to be considered along with suitable ground connections.	These details shall be determined during interface by respective Contractors at design stage.
568.	3 part 2	15	108	New subclause 15.4.20 as per Addendum – 8 (429)	Trench for telecom cables.	Please confirm that even in station areas, the OFC cables shall be laid with signaling and power cables in common ducts.	Clause is self explanatory. Please refer to clause 15.4.14 regarding communication cables to be run with cables carrying high voltage etc.
569.	3 part 2	6	58	6.5.1.1 & 6.5.1.1(2)	Mobile GSM	As per addendum - 8, SI. No: 405, it is said that "IN of WDFC at Ahmedabad should be	Please note that OCC is located in and around Ahmedabad city within a distance

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						possible to integrate with any of the INs of IR as and when required". But in the response to queries set-7 SI. No: 446 the location of OCC building is indicated as Sabarmati south. Hence, kindly amend clause 6.5.1.1(2) to state that the IN for this project is located at Sabarmati South Station	of about 15 km from Right of Way. In this connection please refer to item 110 of Addendum 3.
570.	3 part 1	9	10.7.4	65 of 87	Earthing of outdoor installations	Please clarify if a single earth can be shared / connected to multiple outdoor gears (Signals, location boxes, etc.) wherever feasible.	Earthing of outdoor installations shall be as per Clause 10.7.4 of Vol. III Part 1 of Bid documents.
571.	3 part 1	9	66 of 87	10.7.4.4	All outdoor installations listed below but not limited to, shall be earthed to the nearest Main earth bus bar with a minimum 16 mm² copper conductor	As 16 mm² copper conductors are theft prone, please clarify if GI strips of required dimensions can be used for outdoor Earthing.	No change is envisaged.
572.	1 (1/2)	3	83 of 191	1. c)	Financial Data	Period of 5 Financial years is defined at the c) of Note as follows.  *5 Financial years counted from the calendar year just prior to the calendar	Annual Reports for the last 5 financial years as applicable / available prior to the Bid submission date shall be acceptable.  In case the Annual

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						year of Bid opening.  However, since our Annual Report in English for FY14 (2013-2014) which will contain financial statements in English for FY14 audited by certified accountant would be published in August 2014, we would like to request you accept following period as 5 calendar years.  ✓ FY09 (2008-09) ✓ FY10 (2009-10) ✓ FY11 (2010-11) ✓ FY12 (2011-12) ✓ FY13 (2012-13)	Report for the latest financial year is not available, a copy of the audited financial statements for the same if available may also be submitted, as an additional document.
573	Vol.1 (1/2)	7	179	1 (c)	Starting date of Warranty for 24 month	Please confirm that the start of warranty is NOT "from the date of the Taking Over Certificate of the Works", BUT "from the date of the Taking Over Certificate of each Section of the Works, defined in PC 10.2"	The provision in the Form of Contractor's Warranty has been modified in line with PC 10.2 Ref. Sl. No. 457 of Addendum No. 9
574.	I (Part 1/2)	5	162	Part II / Part B: Particular Conditions/ Sub-clause:	S. No. 28 of Addendum No.2	As S. No. 28 of Addendum No.2, following supplement was added to PC 8.7;	No change in the ATB & PC 8.7 is envisaged.

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		140.	110.	8.7			Refer the response to
						"Provided in case, the	Q. No. 91 (in Reply to
						Contractor has	Queries Part 2).
						completed his work	,
						butIntegrated Testing &	
						Commissioning is held up	
						due to the delay	
						byInterfacing	
						Contractors, the	
						contractor shall be	
						compensated @0.1% of	
						the Contract Price per	
						week of delay or part	
						thereof for theperiod by	
						which the achievement of	
						MS-5 & Ms-6 (combined)	
						wasdelayed on account	
						of default of the	
						interfacing Contractor.	
						For delayin fixing, testing	
						and commissioning of	
						S&T On Board	
						equipmentand Cab radio	
						on account of delay in	
						making available the	
						Locos,	
						the contractor shall be	
						compensated @ 0.1% of	
						the cost of thebalance	
						work per week of delay or	
						part thereof for the period	
						bywhich the achievement	
						of MS-8 was delayed on	
						account of defaultof the	
						interfacing Contractor as	
						decided by the Engineer."	

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						Since the Contractor shall not take any responsibility and cost for the delay caused by other interfacing Contractors and interfacing Parties, such as Indian Railway, please kindly consider that all amount of the delay damages which are defined in ATB (Page 142) and caused due to the delay of other interfacing Contractors and other Parties shall not be applied to the Contractor.	
575.	I (Part 1/2)	5	169	PART II: Part B - Particular Conditions (PC) Sub-clause 15.3	Valuation at Date of Termination	The value of all the works executed by Contractor should be fully paid to the Contractor.  Please kindly reinstate the original FIDIC condition of last line of this Sub-Clause "work executedContract"	No change in PC 15.3 is envisaged.  (Response is same as given at Q.No. 544 for Pkg EM P-4)
576.	l (Part 1/2)	3	123	6.3.vi)	Cross Acceptance status	Please clarify when should be the due date for obtaining of Cross Acceptance for imported item.	Refer Clause 9.5(2) of Vol. III Part1 according to which Cross Acceptance approval is to be obtained before manufacture

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						For instance, such due date shall be beginning of installation or testing & commissioning?	and supply of the said equipment.
577.	III part  1  V	9 11	2 of 87	1.3.6 V-7-1-17	Employer's requirements OCC Layout (indicative)	There is a discrepancy in the no. of controller positions identified in the table given in addendum 4 attachment 5 and drawing no. V-7-1-17 of Vol. 5. The same is being listed below for your ready reference.  1. The table in clause 1.3.6 misses out on the following positions – a. Traffic Controller – 3 Nos.  b. Track (Civil) Console – 1 No.  2. Drawing V-7-1-17 misses out on the following positions – a. Engineering Controller – 1 No.  b. Section Controllers – 3 Nos.  3. Whereas the table in clause 1.3.6 and drg. No. V-7-1-17 both miss out on the maintainer terminal as mentioned in clause Annex. 2 / Cl. 6.8 (A)	(i) Traffic Controller is same as Section Controller.  (ii) Engineering Controller is same as Track (Civil) Controller.  (iii) Clause 1.3.6 is for Controller positions & Maintainer is not a Controller.  Hence no change is envisaged.

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						In this regard, kindly revise the table in clause no. 1.3.6 and the drg. V-7-1-17 to bring parity between the same.	
578.	III part	9	64 of 128	6.5.9 6.5.9.1 to 6.5.9.21	Antenna towers at Radio base stations	From the tender requirement/spec, it seems only lattice type of towers are to be proposed. However now a days Monopole towers are extensively used for GSM telecom purposes due to faster implementation, less foundation area/space requirements. Also GSM antennas are lighter compared to traditional MW antennas/towers. Hence we suggest that bidders should be given options to propose based on Monopole towers design specifications and its related accessories while meeting basic requirements on safety factor, wind load. Also the 40 years life requirement for towers may please be deleted on GSM towers.	Clause 6.5.9 and its sub-clauses areself explanatory and no change is envisaged.

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						Please confirm.	
579.	III part 2	9	86 of 128	10.2	Video surveillance system requirements – Scope of works	We request you to provide the number of CCTVs that needs to be installed at the OCC building to get a comprehensive coverage. Please note that even in various Metro projects of Design & Build nature in India, the no. of CCTVs to be provided are clearly specified in the tender as per the industry practice. This has an added advantage of providing a common platform for all the bidders to compete.	Please refer response to query No. 446.
580.	III Part 1	9	3	1.3.8 (a),(b),(c)	Employer's Requirements	As given in vol-5, V-1-1-8 table 2 SI. No: 8 connection between DFCC Palanpur station and DFCC Chatodar station is classified	Refer Clause 1.3.8 of Vol III part 1 duly amended as per item No. 391 of Addm-8 and item No. 437 of Addm-9.
	Vol - 5	11	V-1-1-8 &V-1-1- 9		Work Areas for Connecting Lines to Existing IR Lines	under "Work Areas for Connecting Lines to Existing IR Lines".  We understand that contractor has to provide Absolute Block Signalling (Slot / Block working or SSBPAC	

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						(Digital)) as per clause 1.3.8 (a) for this connection between Palanpur and Chatodar stations. Please confirm whether or not our understanding is correct?	
581.	III Part 1	9	25	5.5.1.22	Electronic Interlocking System	With reference to the clauses 5.5.1.22 and annexure-2 10.1(i) (a)&(b), we understand that ASM terminal and EI controlling VDU will be different. Please confirm.	Both are same.
582.	III Part 1	9	Annexu re – 2 27 of 44	10.1 (i) b	Wayside Station Equipment – Field Interface Unit (FIU)	As Electronic interlocking system with I/O cards will have capability to interface with potential free contacts, the requirement of FIU in this project appears to be unclear. FIU is used where relay interlocking is required. Kindly elaborate the requirement of FIU in this project.	This requirement will depend on equipment used and design proposed by the Bidder.
583.	III Part 1	9	2 of 87	1.3.6	Employer requirements	Telecom fault controller terminal is present in clause 1.3.6. But there is no clear information	This is included in Clause 6.6 of Annexure 2.

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						given on hardware & software requirement of this terminal in Annexure 2 (Train Monitoring & Diagnostic System – Technical Specification).  Please clarify.	
584.	V	V-7-1-17	162		NKC-S&T-SSD-AL- 20016	The requirements of S&T control terminals (Signaling control and Telecom control) are not present in Annexure 1 & 2 of Volume III Part1 (Train Monitoring and Diagnostic System – Functional Requirement Specification & Technical Specification).	<ul><li>(i) Refer Clause 6.7 for Signal Fault Controller.</li><li>(ii) Refer Clause 6.6 for Telecom Fault Controller.</li></ul>
585.	III Part1	9	Annexu re 7-5:	1.4	Interface Issues Between ST P-5 and CP-14, ST P-17 and To Be Decided (TBD) Contractor	We understand that ST P5 contractor need not provide any video wall for phase II TMS in OCC as part of this contract.  Please clarify.	Refer Clause 1 of Annexure-1 for scope of TMS work in P-5.
586.	III Part1	9	Annexu re 7-6: 5 of 7	1.5 (IV),(V)	Interface Issues Between ST P-5 And ST P-5A: Definition And Scope	Please elaborate the interfaces with TPWS in detail for the interface of failure status from LEU, as ST P5 contractor has no means to access this information.	These details shall be determined during interface at design stage by the relevant Contractors.
587.	III Part 1	9	Annexu re 2: 40 of 44	13	List of Recommended Spares	We understand that the list without prices will be submitted in	1.Yes, in accordance with Clause 6.5 (iii) of Vol. I Part 1 of Bid

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						the technical bid and the list with prices will be submitted along with the price bid. Kindly confirm. Please confirm.  2. Please confirm that the price of the recommended spares will not be used in evaluation of the price offer of the bidder.  3. This project already has 2 year sectional DNP and 3 years warranty thereafter. In this regard, please specify the period for which these recommended spares are required	documents.  2. Supply of spares is a part of Employer's Requirements. Its cost will be dealt with as per "Schedule 2 — Preamble to Price Schedule" of Vol. I Part 2 of Bid documents.  3. Quantity of spares shall be as per Clause 13.6 of Vol. III Part 1 of Bid documents.
588.	I Part 2	6	1 to 35	Schedule 5.1 – Schedule 5.16	Schedule – 5 Payment Schedule	This project involves interface works with 10 IR stations at each Jn. Station and 4 siding works. As per tender, the contractor has to interface with IR via DFCCIL and the works in IR jurisdiction will be carried out departmentally by the IR.  For block lengths > 4 Kms, Absolute Block	No change is envisaged.

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						working is to be established using either UFSBI or SS BPAC (digital).  For block lengths < 4 Kms, Slot working has to be established as clarified in addendum – 8 SI. No: 391.  In response to bidder's queries Set No. 8 SI. No: 489, it was clarified that this work is covered under Cost Center No. 5.3 – Electronic Interlocking.  In our understanding, the works at DFCCIL stations can be carried out independently from these interface works and the payment of one should not be linked to the other. Hence, we request DFCCIL to reconsider it and provide a separate cost center for interface works of IR and Sidings separately.	
589.	III part 1	9	13 of 87	3.3.2	LED Signal Lighting unit	We understand from the LED vendors that RDSO has recently revised the LED specification and the new specification no. is: RDSO/SPN/199/2010	Refer Clause No. 1.2.5 of Vol. III Part 1 of Bid documents.

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500	III post			2.4.5	System Assurance	Rev 1.0 w.e.f 11.04.2014. Please clarify which specification no. is to be used for this project?	Nood of ISA
590.	III part	9 8	13 of 87  Annexu re 5: 1 of 2	3.4.5 Appendix 5	System Assurance Deign Certificate	When The design certificate is read in conjunction with clause 3.4.5, It is understood that the contractor has to obtain certificate from DFCCIL's ISA for certain design submissions.  4. Please confirm whether or not our understanding is correct.  5. Please identify the submissions for which the ISA's certificate is to be submitted along with the DC.  On perusal of the document, we can identify the safety case as only such document which requires ISA's certificate as a prerequisite for	Need of ISA certification shall be indicated by the Contractor for individual submissions included in "Design and Certification Programme" to be submitted as per Clause 7.6 of Vol. II of Bid documents.
591.	Vol.III	9	Annex	3.4	AT Power Supply by	submission to the client.  According to	(i) Block Signalling on

SI.No. Vol	ol. No.	Section No.	Page No.	Clause No.	Title	Questions	DFCCIL's Response
(1	1/2)		7-1 Page 3		EM P-4	EMP4/PS/201 (R) issued as Addendum 3Attachment-16,	link line connecting PalanpurwithChad otar will be as per
Vo	ol.III	9	Appendi	3.4.3		electrification of tracks	Clause 1.3.8 of Vol
(2	2/2)		x 9-1 Page 24		AT Power Supply by EM P-4	from Palanpur JN to Chadotar STN is ended at the point of 200m	III part 1 duly amended as per item No. 391 of
Vo	/ol.V	11	EMP4/P S/201 (R) Sheet 2/2		Traction Supply Control Posts for EM P-4	from the station end of Palanpur JN.  Please confirm whether the section between Palanpur JN and Chadotar STN is electrified or not.  If not, please clarify who shall provide what type of power supply to ALH/TH and S&T equipment at Chadotar STN.	Addm-8 and item No. 437 of Addm- 9.  (ii) Local/ DG Power supply shall be provided by CT P- 3 Contractor at ChadotarStn.as per Clause 5.10.4 of Vol III part 1 of Bid documents.  (iii) For TH,AC 230 volt 50 Hz Power supply shall be provided by the other Contractor.