

**Dedicated Freight Corridor Corporation of India Limited**  
(A Government of India Enterprise)

**Addendum No. 2 Dated 25.09.2013**  
**Addendum / Amendments to the Bid Documents for**

**DESIGN AND CONSTRUCTION OF SIGNAL AND TELECOM WORKS FOR DOUBLE LINE RAILWAY INVOLVING TRAIN DETECTION SYSTEM, TRAIN PROTECTION & WARNING SYSTEM, ELECTRONIC INTERLOCKING IN STATIONS, AUTOMATIC SIGNALLING IN BLOCK SECTIONS, 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 AND TRAIN MONITORING AND DIAGNOSTIC SYSTEM FOR DADRI – JNPT SECTION INCLUDING TESTING AND COMMISSIONING ON DESIGN-BUILD LUMP SUM PRICE BASIS OF WESTERN DEDICATED FREIGHT CORRIDOR**

**SIGNALLING AND TELECOMMUNICATION WORKS CONTRACT**  
**(Rewari – Makarpura of Phase I and part of Phase 2)**

Ref. : ICB No. ST P-5

Sl. No.	Vol. No.	Section No.	Page No.	Clause No.	Item	Addendum / Amendments to the Bid Documents						
23.	I (Part 1/2)	2	56	3.2(e)(iii) of Experience Criteria in Stage 3: Evaluation of Compliance with the Qualification Requirements	Specific Supply, Installation, Testing and Commissioning Experience in Key Activities	Replace the experience criteria “3.2(e)(iii): Specific Supply, Installation, Testing and Commissioning Experience in Key Activities” with the revised experience criteria attached herewith as “ <b>Attachment: Addm 2-1</b> ”						
24.	I (Part 1/2)	2	73	5.5(b) of Stage 5: Financial Evaluation	Conversion to single currency and comparison	Modify the existing sub-para 5.5(b) of Stage 5: Financial Evaluation as under:  <b>5.5 Conversion to a single currency and comparison</b> b) The exchange rate to be used for the conversion shall be the official Reference Rate published by Reserve Bank of India, as on 19.8.2013 irrespective of the due date for submission of the Bid.						
25.	I (Part 1/2)	3	95		Form EXP-3: Specific Supply, Installation, Testing and	In the Form EXP-3, replace the table for “Information in respect of each of the claimed experience” as under: <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 5%;">Sl. No.</th> <th style="width: 75%;">Description of the Key activities in accordance with Sub-Factor 3.2 (e) (iii) of Section 2:</th> <th style="width: 20%;">[insert response to inquiry indicated in left column]</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>	Sl. No.	Description of the Key activities in accordance with Sub-Factor 3.2 (e) (iii) of Section 2:	[insert response to inquiry indicated in left column]			
Sl. No.	Description of the Key activities in accordance with Sub-Factor 3.2 (e) (iii) of Section 2:	[insert response to inquiry indicated in left column]										

Sl. No.	Vol. No.	Section No.	Page No.	Clause No.	Item	Addendum / Amendments to the Bid Documents
					Commissioning Experience	1 On-board equipment of ATP/ ETCS/ Train Protection & Warning System to Railways/ Metro Railway/ Monorails in any one year in last ten years.
						2 Track side/ line side equipment of ATP/ ETCS/ Train Protection & Warning System to Railways/ Metro Railway/ Monorails in any one year in last ten years.
						3 Supply of Electronic Interlocking to Railways/ Metro Railway/ Monorails in any one year in last ten years.
						4 Installation, Testing and Commissioning of Electronic Interlocking System to Railways/ Metro Railway/ Monorails in any one year in last ten years.
						5 Train Management and diagnostic System (TMS) or Centralised Traffic Control System (CTC) to Railways/ Metro Railway/ Monorails in any one year in last ten years.
						6 Digital Axle Counter to Railways/ Metro Railway/ Monorails in any one year in last ten years.
						7 Fibre Optic Communication System with SDH equipment for Railways/ Metro Railway/ Monorails applications in any one year in last 10 years.
						8 GSM(R) System in any one year in last ten years.
26.	I (Part 1/2)	3	123	6.3(vi)	Form I-B-7: Technical Particulars – Signal and Telecommunication System	Add new sub-para (xi) at the end of clause 6.3, as under:  “(xi) Type of power supply voltage proposed for the Points Motor. If 380V - 3 phase supply is proposed, then basic specifications of the Points Motor to be submitted.”
27.	I	4	137	Para 4	List of Eligible Countries of Japanese ODA STEP Loans	Replace existing para (4) with the following:  “4.1 This package shall be implemented under STEP Loan conditions. 4.2 STEP Components with cumulative cost assessment amounting to 56% (fifty six percent) of the total contract price of this package (excluding local taxes and duties) are to be sourced from Japan/ Japanese origin – (in terms of provisions contained in this Section-4 ‘List of Eligible Countries of Japanese ODA STEP Loans’) 4.3. Procurement of following STEP components from Japan/ Japanese origin has been approved for permanent works in this package. (i) Electronic Interlocking (ii) Train Protection and Warning System (TPWS) (iii) Train Monitoring and Diagnostic System (TMS) (iv) Digital Axle Counters

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						<p>4.4 The Bidder shall certify his assessed STEP ratio in the format (FIN-6) as specified in the Bid Document to demonstrate fulfillment of STEP ratio specified in Para 4.2 above.</p> <p>4.5 In case the bidder is not able to fulfil the STEP ratio specified in Para 4.2 above after taking into account full quantities of all items (listed in para 4.3 above), he may propose additional items in its Technical Bid, to meet the minimum STEP ratio specified in para 4.2.</p> <p>Bidders shall not include any financial details or financial aspect pertaining to such 'other item' in his Technical Bid.</p> <p>4.6 The cost of all STEP component shall be calculated as the actual amount paid on 'CIF' (Cost, Insurance &amp; Freight) basis, where 'CIF' has the standard meaning as defined in INCOTERM 2010."</p>
28.	I (Part 1/2)	5	162	Part II / Part B: Particular Conditions/ Sub-clause: 8.7	Delay Damages	<p>Supplement the PC 8.7 with the following:</p> <p>"Provided in case, the Contractor has completed his work but Integrated Testing &amp; Commissioning is held up due to the delay by Interfacing Contractors, the contractor shall be compensated @ 0.1% of the Contract Price per week of delay or part thereof for the period by which the achievement of MS-5 &amp; Ms-6 (combined) was delayed on account of default of the interfacing Contractor. For delay in fixing, testing and commissioning of S&amp;T On Board equipment and Cab radio on account of delay in making available the Locos, the contractor shall be compensated @ 0.1% of the cost of the balance work per week of delay or part thereof for the period by which the achievement of MS-8 was delayed on account of default of the interfacing Contractor as decided by the Engineer."</p>

Sl. No.	Volume	Section/Chapter	Page No.	Clause / Para No.	Item	Amendments in the Bidding Documents
29.	II	1	1	1.2.1	General information	In the first line of the sub-clause, words "...931 km.." are replaced by "...915 kms.."
30.	II	2	3	2.1.1	Definitions	Definition of Specialist Subcontractor is modified as under: <b>"Specialist Subcontractor:</b> means any person so named in the Prequalification Application as a Specialist Subcontractor for a part of the Works which requires highly specialized inputs such as: (i) Installation, testing & commissioning of TPWS/ EI/ Digital Axle Counters; (ii) Supply, installation, testing & commissioning of TMS/ Fibre Optic Communication system/ GSM(R) system; (iii) Specialist design consultant etc. and the legal successors in title to such person, but not any assignee of any such person."
31.	II	3	8	3.3	Relevant documents	In the Clause 3.3 and its sub-clause 3.3.1, Replace the words "Employer's Drawings" with "Reference Drawings".
32.	II	7	22	7.5.5.3(iii)	Imported Equipment	Sub Clause is modified as under: "Obtaining Cross Acceptance approval from RDSO for imported Signalling equipment, if not already obtained;"
33.	II	7	30	7.20.1	Progress Meetings	In the 1st sentence of the Clause, words "Employer' Representative" are replaced by "Engineer"
34.	II	11	60, 61 & 62	11.1.2, 11.1.3, 11.1.4, 11.2.2, 11.2.4, 11.3.1, 11.3.3, 11.4.1, 11.4.2 & 11.4.10	Safety, Health and Environment	Replace the words "Appendix 13" appearing in the Clauses with "Annexure 10".
35.	II	15	83	15.1.2(v)	Security Obligations	The Clause is modified as under: "All executable code including all data configuration tables;"
36.	II	15	83	15.1.2	Security Obligations	Sub-Clauses (v) to (viii) are renumbered as (i) to (iv)
37.	II	Appendix 12	1, 2, 3 & 4	1.4, 2.1(2), 2.1(3)(a), 2.1(7), 3.5(6), 4.3(3),	Temporary Works	Replace the words "Appendix 13" appearing in the Clauses with "Annexure 10".

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				4.4(3) & 4.5(2)		
38.	III Part 1	1	3	1.3.8	Employer's requirement	The Clause is modified as under: "The Signalling System's electronic equipment shall be designed and supplied for a Design Life of 15 years and associated wayside equipment shall be designed and supplied for Design Life of 25 years."
39.	III Part 1	1	3	1.3.9	Provenness of equipment	Delete the words "... along with RDSO approval certificates.."
40.	III Part 1	1	4	1.4.3.2	TMS terminals for IR	Replace first sentence of the Clause with the following: "TMS terminals shall be provided at designated places of IR to enable IR to give weekly forecast of trains coming in from IR to DFC to enable DFC to prepare time table."
41.	III Part 1	1	4	1.4.3.3(new)	Miscellaneous User terminals	Add new Clause 1.4.3.3 as under & renumber existing Clause 1.4.3.3 as 1.4.3.4. "35 No. of Miscellaneous User terminals shall be provided at IR's Junction stations, IR's Divisional Control offices, IR's Zonal Control offices, Sidings and Container terminals and DFCCIL's Corporate office etc."
42.	III Part 1	2	7	2.2	Abbreviations	Abbreviation "GSMI" is modified as "GSM(R)".
43.	III Part 1	3	10	3.1.1(c)	Proven Design	The second sentence of the sub-clause reading as "In case these stipulations are not fulfilled, the Contractor shall furnish sufficient information to prove the basic soundness and reliability of the offered Sub-system to the satisfaction of the Engineer." is modified as "In case stipulations (a) and (b) are not fulfilled, the Contractor shall furnish sufficient information to prove the basic soundness and reliability of the offered Sub-system to the satisfaction of the Engineer." and kept as new sub-clause 3.1.1(d).
44.	III Part 1	3	10	3.1.2(iii)	Design philosophy	The Clause is modified as under:  "The minimum design life of mainline electronic equipment and the associated wayside equipment is 15 years and 25 years respectively."
45.	III Part 1	3	11	3.2.3	Design Criteria	The Clause is modified as under: "The Contractor shall prepare and submit Safety Case for redundant Track Vacancy Detection System for Block sections and get it validated by Independent Safety Assessor."
46.	III Part 1	3	11	3.2.5	Design Criteria	The Clause is modified as under: "LEUs shall preferably be provided indoor i.e. in Signal equipment Rooms at stations and in Auto Location Huts in Block sections. However, LEUs may be provided track side if required by design subject to consent by the Engineer at detailed Design stage."
47.	III Part 1	4	15	4.2.3	Safety requirements	The Clause is modified as under: "TMS can have SIL0 or equivalent safety level."

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48.	III Part 1	4	15	4.2.5	Safety requirements	The Clause is modified as under: “Even when long power failure results in total drainage of PSS batteries, the signaling system shall be ready after power-ON and initialization for use by ASM/Controller within two minutes of power restoration.”
49.	III Part 1	4	15	4.3.4, 4.3.5	Reliability Requirements	In the first sentence of the Clauses, words “useful life” may be replaced by “Service life”.
50.	III Part 1	4	16	4.3.6	Reliability of Point Machines	Replace the Clause with “NOT USED”.
51.	III Part 1	4	16	4.5.1	Electromagnetic Compatibility (EMC) Requirements	Second sentence of the Clause is modified as under: “Proximity to IR’s 25KV RE and its effect on DFC equipment shall also be taken into account.”
52.	III Part 1	5	17	5.1 – (3) (f)	Reporting of functions	Replace the Clause with “Passing Signal at Danger”.
53.	III Part 1	5	18	5.3.1-(2)(a)	Locomotive brake system	Words “Pneumatic and Regenerative” are replaced by “To be decided in Interface.”
54.	III Part 1	5	18	5.3.1-(2)(l)	UIC/UNISIG SRS/FRS version of existing TPWS	Replace “Ver. 2.3.0” with “Ver. 2.3.0.d”.
55.	III Part 1	5	19	5.3.1-(2)(m)	Requirement of Juridical Recording Unit	Requirement of Juridical Recording Unit is changed to “Not required”.
56.	III Part 1	5	20	5.3.1 – 8) (i)	Data to calculate speed profile	The Clause is modified as under: “To get gradient, curve, signal aspect and other necessary information from trackside Balise;”
57.	III Part 1	5	20	5.3.1 – 8) (ii)	Information received from	Delete the words “....and data base”.
58.	III Part 1	5	20	5.3.1 – 8) (x)	On Board vital data and alarm transmission via radio	Replace the Sub-clause with “NOT USED”.

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59.	III Part 1	5	21	5.3.1-17	Doppler Radar	The Clause is modified as under: "Duplicated Radar shall be provided wherever need is felt to ensure compliance of Clause 5.3 of RDSO specification."
60.	III Part 1	5	23	5.4.1.10	Train Detection system at stations	Replace the words "OCC/ASM" with "ASM".
61.	III Part 1	5	23	5.5.1.8	EI processor capacity	Replace the Clause with "EI processor shall have sufficient capacity to handle the expanded installation as per yard layouts supplied without any degradation in performance."
62.	III Part 1	5	24	5.5.1.12	Electronic Interlocking System	In 4 <sup>th</sup> line of the Clause, replace the words "Employer's Drawings" with "Reference Drawings".
63.	III Part 1	5	24	5.5.1.13	Electronic Interlocking System	In 2nd line of the Clause, replace the words "Employer's Drawings" with "Reference Drawings".
64.	III Part 1	5	24	5.5.1.16(1)	Points motor	The Clause is modified as under: "1) Points Motor: (a) Points motor shall work either on 380V 3 phase or 110V DC supply. The Contractor shall propose the type to be used. This shall be got agreed by the Engineer. (b) If the Bidder proposes 380V 3 phase supply for Points motor, then he shall submit Basic Specifications for the Points motor which shall be developed into detailed Specifications by The Contractor at Detailed Design stage."
65.	III Part 1	5	25	5.5.1.17	Electronic Interlocking System	The Clause is modified as under: "Health and Condition monitoring of all equipment including point machines shall be provided."
66.	III Part 1	7	38	7.2	TECHNICAL REQUIREMENTS	In the Clause and its sub-clause (1) & (2), replace the words "Full proof" with "Foolproof".
67.	III Part 1	10	63	10.7.3.1	Earthing of indoor equipment	1st sentence of the Clause reading as "Main earth bus bar shall be provided in the PSS(S&T) room by another Project Contractor." is replaced as under: "ST P-5 Contractor shall extend Main earth provided in the Station/OCC buildings by Civil Contractor to S&T equipment rooms."
68.	III Part 1	12	68	12.2.1(1)	List of drawings	Sub-Clause is modified as "Preliminary Design".
69.	III Part 1	13	73	13.5.1(2)	Support during Defects Liability Period	The Clause is modified as under: "During the first three months of Defect Liability Period, the Contractor shall provide necessary guidance to O&M staff in routine maintenance so that staff is able to carry out this activity independently as per training imparted for the same."

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70.	III Part 1	14	79	14.3(10)	General requirements of training	The Clause is modified as under: "The Contractor shall be required to arrange technology transfer and training to the Employer's staff in respect of design, installation, testing and commissioning of the System and each subsystem to enable them to work as trainers. The Employer will nominate up to three (3) persons for each subsystem for this training."
71.	III Part 1	Annexure 1	10	7.7(vii)d	Time table module	The Clause is modified as under: "A train service shall have following (but not limited to) attributes:"
72.	III Part 1	Annexure 2	3	4.1(c)(iv)	Train Operation	Replace the Clause with "OCC will be in or around Ahmedabad city within about 15 Kms. from Right Of Way."
73.	III Part 1	Annexure 3	1	Table of Stations	Route lengths in Civil packages	Route lengths in Civil packages given in last column as "P3 (282 Km), P2 (270 Km) & P1 (300) Km)" may be modified as "P3 (289 Kms.), P2 (284 Kms.) & P1 (342) Kms."
74.	III Part 1	Annexure 6	4	3.5(2)	OCC Location	Replace the Clause with "OCC Building is planned in or around Ahmedabad city".
75.	III Part 1	Annexure 7-1	3	3.4	AT Supply	Clause 3.4.2 is modified and new Clause 3.4.3 added as given below with subsequent Clauses renumbered as 3.4.4 to 3.4.6: 3.4.2 EM P-4 Contractor shall provide 240 V Single Phase AT supply tapped from both Up and Dn OHE with automatic Changeover in Power Supply Room of S&T at all stations. 3.4.3 For Block Sections, ST P-5 Contractor shall coordinate with EM P-4 Contractor to group Auto Location huts and Telecom Huts located within 2Kms. of each other. Each group containing a total of two such huts shall be provided with 240 V Single Phase AT supply tapped from both Up and Dn OHE with automatic Changeover either in Location hut or Telecom Hut as per Drawing No. EMP4/OHE/106(R) titled "25KV/240V Auxiliary Transformer supply for S&T equipment at station building and open route showing scope of work of EMP-4 Contractor". ST P-5 Contractor shall extend 240V supply thus provided to other Hut of the group using 2X25 Sqmm Aluminium armoured cable.
76.	III Part 1	Annexure 7-3	2	2.2	The ST P-5 Contractor's Scope of Works	The beginning of Clause with "The ST P-5 Contractor shall take a lead in ...." may be replaced by "The ST P-5 Contractor shall associate in .....".
77.	III Part 1	Annexure 10	64	47.1.1	Work adjacent to railways	In 4 <sup>th</sup> line of the Clause, replace the words "Employer's Drawings" with "Reference Drawings".
78.	III Part 1	10	57	10.3.3.1	Installation of On board TPWS	The Clause is modified as under: "On board TPWS equipment including antenna shall be installed in each of the Electric



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					Equipment	Locomotives. The cabinet, cabling, connectors and terminal strips, antenna, power supply units, Odometer, DMI etc. shall be manufactured & supplied by the P5 Contractor. Supervision of installation for first few locos (say 4) will be done by P5 contractor at the Rolling Stock Contractor's work place simultaneously training P7 staff so that installation on locos can be done independently by them. P5 Contractor shall also supervise installation of on board equipment for first two locos of CKD/SKD at nominated Workshop for TOT in coordination with P7 Contractor simultaneously training Workshop staff so that installation on locos can be done independently by them."
79.	III Part 1	9 Part 1	22	5.4.1.2 vi)	Evaluator for Supervisory System	The Clause is modified as under: "If evaluators have spare capacity (beyond 20% of equipment maximum capacity reserved for future use), then evaluator of UP line main system shall be used for providing Supervisory system on DN line and vice versa. If spare capacity is not available, then evaluators of Main and Supervisory systems shall be separate."
80.	III Part 1	9 Part 1 Annex-2	17	6.11	Miscellaneous User Terminal	The Clause is modified as under: "Miscellaneous terminals shall be located at important / relevant offices to have first hand information about running of trains in visual form and in required format. This terminal shall be either connected directly on LAN or in field network."
81.	III Part 1	5	20	5.3.1 9) (iv)	(iv) to interface with interlocking system and communicate the route condition and other necessary conditions;	The Clause is modified as under: "The TPWS track-side system shall interface with the signalling system without affecting normal working & safety of signalling system. It shall take input regarding signal aspect through potential free contacts of the Lamp Checking Relays (ECRs)."
82.	III Part 1	9	35 of 84	6.2.5	Number of routes	The Clause is deleted.