



Raising of speed to 160 kmph on existing New Delhi – Howrah route
- A mission to achieve a travel time of 12 Hours between Delhi & Howrah.



Updated as on 25.02.2022

**STANDARD
ENGINEERING, PROCUREMENT AND
CONSTRUCTION (EPC) AGREEMENT
FOR**

PROVISION OF TRAIN COLLISION AVOIDANCE SYSTEM (KAVACH)
ALONG WITH **TWO 24 FIBER** OFC BACKBONE IN SECTIONS BETWEEN
PT. DEENDAYAL UPADHYAY (DDU) AND PRADHANKHUNTA (PKA) OF
THE EAST CENTRAL RAILWAY

Major Items Covered which are covered in the floated Tender on 15.02.2022

1. Name of work, its Bid cost and project completion period
2. Eligibility Criteria
3. Bid Security
4. Maintenance Obligations
5. Payment Schedule
6. Other changes incorporated in compliance of Railway Board guidelines
7. Dates for various stages of Bid process

Name of work, its Bid cost and project completion period

SN	Provisions	Related Para no.	Related Document (RFP/ MCA/ FSR)	References/Remark
1	Provision of Train Collision Avoidance System (KAVACH) along with two 24 Fiber OFC backbone in the sections between Pt. Deendayal Upadhyay (DDU) and Pradhankhunta (PKA) of the East Central Railway.	Heading, NIT, description of work, para I etc	RFP, MCA and FSR	Railway Board has issued policy guidelines for Inclusion of Price adjustments clause, Dispute Resolution clause, Maintenance clause, etc.
2	Bid Cost- 151.211Cr. for 417 Km section.	NIT and para I.1.1	RFP	This cost does not include the cost of AMC/Maintenance obligation.
3	Project Completion period- 24 Months	NIT and para I.1.1 Sch-I for Project Completion Schedule	RFP MCA	Project Completion period to complete the Kavach work.

Eligibility Criteria

SN	Provisions	Related Para no	Reference/Remark
1	Railway sector would be deemed to include Supply, Installation, Testing and Commissioning of Signalling and/or Telecommunication (S&T) system like Relay Based interlocking, Electronic Interlocking, S&T works pertaining to RE modification , Centralised Traffic Control System, Train Management system , Automatic Train Protection System, Automatic Block signaling, Mobile Train Radio communication system, OFC Based communication system, Passenger information display system, Control communication system, Information Communication and Technology (ICT) system , Any other work of voice/data communication system with/without tower works, supply and commissioning of Electronics/Computer based system on Railway Rolling Stock for Indian Railways/Metro/Suburban Transit/High Speed Railway or Central/State Government department/Organization/PSUs as a stand-alone work or as a part of composite work.	2.2.2.1 and 2.2.2.4 of RFP	Railway Board letter no 2013/Sig/TCAS/Status dtd. 10.09.2021 and corrigendum issued on dts. 13.09.2021
2	At least one Eligible Project of Railway Sector as mentioned in clause 2.2.2.4/iii of value of not less than 15% (Fifteen per cent) of the Estimated Project Cost and have received payments for not less than 75 (seventy-five) per cent value of such project	2.2.2.1 (ii) of RFP	

Bid Security

SN	Provisions	Related Para no
1	<p>A Bidder is required to submit, along with its Bid, a Bid Security of Rs.***** (the "Bid Security"), refundable not later than 200 (Two hundred) days from the Bid Due Date, except in the case of the Selected Bidder whose Bid Security shall be retained till it has provided a Performance Security and Additional Performance Security (if any) as per the provision of this RFP and LOA. The Bidder will have to provide Bid Security through e- payment Gateway of Authority. The Bid shall be summarily rejected if it is not accompanied by the prescribed amount of Bid Security. The Bid document shall be available free of cost through e-portal (IREPS.gov.in).</p>	<p>1.2.4, 2.2.1(c), 2.6.2, 2.6.3, 2.6.4, 2.6.5, 2.20.4, 2.20.5, 3.3.4 and 4.1 of RFP</p>
2	<p>Bid security amount: Rs. 75,60,600.00</p>	<p>NIT on www.ireps.gov.in</p>

Maintenance Obligations

SN	Provisions	Related Para no
1	<p>15A.1 Maintenance Obligations of the Contractor</p> <p>(i) The Contractor shall maintain the Project of Modern Signalling System KAVACH for a period of 15 (fifteen) years, commencing from the date of the Completion Certificate (the “Maintenance Period”). For the performance of its Maintenance obligations, the Contractor shall be paid:</p> <p>1.5% of the total Capital cost of KAVACH equipments as indicated in schedule G per annum, for the Defect Liability Period (i.e. first four years from the date of completion certificate).</p> <p>3% of the total Capital cost of KAVACH equipments as indicated in schedule G per annum, from completion of Defect Liability Period till completion of Maintenance Period.</p>	<p>Clause 15A of MCA</p>
2	<p>This does not include Towers, OFC System, damaged/theft RFIDs and Signalling System other than KAVACH System.</p>	<p>Clause 10 of Schedule-Q of MCA</p>
3	<p>Lump sum payment for Maintenance shall be adjusted every quarter for changes in rates and prices of various inputs in accordance with the formula given below:</p> $V = P \times (W_i - W_0) / W_0$ <p>Where V = Increase or decrease in the quarterly lump sum payment, P = Quarterly lump sum payment due to the Contractor, etc.</p>	<p>Clause 17.9a of MCA</p>

Payment Schedule

SN	Item Description	Corrected Para no								
I	<p style="text-align: center;">SCHEDULE – G <i>(See Clauses 10.1.4 and 17.3)</i></p> <p style="text-align: center;">Contract Price Weightages</p> <p>1.1 The Contract Price for this Agreement is Rs. _____ Crs. It is assigned for different components of the Railway Project as follows.</p> <table border="1" data-bbox="239 789 1677 1214"> <tbody> <tr> <td data-bbox="239 789 1089 894">Signaling works of Provision of TCAS complete.</td> <td data-bbox="1089 789 1677 894">76.31% of the Contract Price</td> </tr> <tr> <td data-bbox="239 894 1089 1000">Telecommunication work for Provision of two 24 Fiber OFC Backbone.</td> <td data-bbox="1089 894 1677 1000">12.38% of the Contract Price</td> </tr> <tr> <td data-bbox="239 1000 1089 1105">Civil work for provision of Service building at Stations/LC gates/IBH.</td> <td data-bbox="1089 1000 1677 1105">11.31% of the Contract Price</td> </tr> <tr> <td data-bbox="239 1105 1089 1214">Annual Maintenance Obligation for TCAS system for 15 years.</td> <td data-bbox="1089 1105 1677 1214">0% of Contract Price</td> </tr> </tbody> </table>	Signaling works of Provision of TCAS complete.	76.31% of the Contract Price	Telecommunication work for Provision of two 24 Fiber OFC Backbone.	12.38% of the Contract Price	Civil work for provision of Service building at Stations/LC gates/IBH.	11.31% of the Contract Price	Annual Maintenance Obligation for TCAS system for 15 years.	0% of Contract Price	<p><u>Schedule G of MCA</u></p>
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Civil work for provision of Service building at Stations/LC gates/IBH.	11.31% of the Contract Price									
Annual Maintenance Obligation for TCAS system for 15 years.	0% of Contract Price									

Other changes incorporated in compliance of Railway Board guidelines

- **WPC and SACFA clearance:** The frequency of the operation for TCAS will be defined by RDSO. In order to avoid complications at later stages, the application for WPC & SACFA shall be filed by Railway so that the license remains with Railways. The Contractor shall submit all documents as desired by Railways for obtaining WPC clearance and SACFA clearance for use of towers and radios. The application for WPC license and SACFA clearance will be filed and obtained by Authority at Wireless Planning Commission, Ministry of Telecommunication, New Delhi.
- The block sections are 6-8 KM long and it shall be possible to cover entire section through UHF communication system installed at stations. However, wherever tower is not available or it is required to ensure reach of UHF Communication, additional tower of suitable design shall be erected at suitable locations. Radio Strength Survey to be done for (RSS) for finalisation of Tower location, Design, Supply & erection of 40m high Lattice Tower along with fencing, painting, aviation lamp, earthing arrangement, etc to be done at the required locations identified in Radio Survey as per latest RDSO guidelines. However, the strength of Radio must be available continuously in entire station and Block section for UHF communication **with minimum Fade margin of 30dB at receiver** and future implementation of Automatic Signaling with TCAS as per RDSO's specification(s).
- The TCAS shall be provided as per RDSO specification RDSO/SPN/196/2012, Ver. 3.2 or latest (**RDSO/SPN/196/2020 version 4, if approved by RDSO**) and advisory Note STS/E/TAN/5001, Ver 1.0, dt. 20/06/2019 or latest. (para 2.1.2 (x) of Annexure-I of Schedule-B of MCA)

Dates for various stages of Bid process

Sl. No.	Event Description	Date
1.	Invitation of RFP (NIT)	15-02-2022
2.	Last date for receiving queries	25-02-2022
3.	1 st Pre-Bid meeting at venue 2.11.4 (i) or Online as per clause 5.1	25-02-2022
4.	Authority response to queries latest by	04-03-2022
5.	2 nd Pre-Bid meeting at venue 2.11.4 (i) or Online as per clause 5.1	22-03-2022
6.	Authority response to queries latest by	29-03-2022
7.	Last date of Request for Bid Document	11-04-2022 up to 11.00 AM
8.	Bid Due Date	11-04-2022, up to 12.00 hrs
9.	Physical Submission of all documents listed in clause no 2.11.2	18-04-2022, up to 11.00 AM
10.	Opening of Technical Bids at venue 2.11.4 (i)	19-04-2022 after 12:30 hrs
11.	Declaration of eligible / qualified Bidders	Will be intimated during bidding process
12.	Opening of Financial Bid	Will be intimated during bidding process
13.	Return of signed duplicate copy of LOA	Within 7 days of LOA issue
14.	Validity of Bid	180 days from Bid Due Date
15.	Submission of Performance Security	Within 30 days of issue of LOA.
16.	Signing of Agreement	Within 60 days of receipt of LOA.

Any Questions or Suggestions???

References:

- [Rly Bd's Standard EPC Tender Document for single stage two packet system.](#)
- [Rly Bd's letter for EPC tender for TCAS work.](#)

Thank You!!