



**REQUEST FOR PROPOSAL  
FOR  
INDEPENDENT SAFETY ASSESSMENT SERVICES  
FOR**

Signalling System including TPWS of Phase-I (Rewari - Makarpura) of the Western Dedicated Freight Corridor and Signalling Generic Products.

**TENDER NO.: HQ/S&T/WC-I/ISA-R**

**ISSUED ON 26-10-2016**

Employer:  
DEDICATED FREIGHT CORRIDOR CORPORATION OF INDIA LIMITED  
(A GOVERNMENT OF INDIA ENTERPRISE)  
MINISTRY OF RAILWAYS

INDIA

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# **REQUEST FOR PROPOSALS (RFP)**

Independent Safety Assessment Services for Signalling System including TPWS of Phase-I (Rewari - Makarpura) of the Western Dedicated Freight Corridor and Signalling Generic Products.

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## Section 1. Letter of Invitation

HQ/S&amp;T/WC-I/ISA-R

New Delhi, Dtd 26-10-2016

**Subject: Independent Safety Assessment Services for Signalling System including TPWS for Western Dedicated Freight Corridor between Rewari to Makarpura (Phase-I) and for Signalling Generic Products.**

1. The Dedicated Freight Corridor Corporation of India Ltd. invites proposals to provide the following services: Independent Safety Assessment Services for Signalling System including TPWS of Western Dedicated Freight Corridor between Rewari to Makarpura (Phase-I) and for Signalling Generic Products. More details on the services are provided in the Section 5: Terms of Reference.
2. Your firm is being invited to submit a proposal for the Independent Safety Assessment (ISA) Services. The invitation is based on Research Designs and Standards organization (RDSO) of Indian Railways Letter No. STS/E/ISA-VOL-III Dated 07.12.2015.

**A: For Metro Signalling Projects/systems: 5 firms : NA**

**B: For Mainline Signalling Projects/systems: 10 firms**

| S.No | ISA Name                           | Address  |
|------|------------------------------------|--|
| 1    | M/s Bahn consult                   | TEN bewertungsges.m.b.H; A-1140Wien,<br>Diestrweggasse2 Vienna, Austria.<br>Tele:4369915058810<br>Fax:4318920058<br>Email:(i) <a href="mailto:schussek@bcten.com">schussek@bcten.com</a> (ii) <a href="mailto:railway@bcten.com">railway@bcten.com</a>   |
| 2    | M/s Halcrow Rail Approvals Ltd.,   | Quarnmill House, Stores Road, Derby DE21 4XF (UK)<br>Tele:+44(0)1332222620, FAX:+44(0)1332222621<br>Email:mullinsd@halcrow.com   |
| 3    | M/s Interfleet Technology          | Interfleet House Pride Parkway, Derby DE248HX (U.K.) Tele:44(0)1332223079, +9142438796(India);<br>Fax:44(0)1332223331 Email:<br>(i) <a href="mailto:noble.i@interfleet.co.uk">noble.i@interfleet.co.uk</a> (ii) <a href="mailto:Phllips.m@interfleetco.uk">Phllips.m@interfleetco.uk</a><br>(iii) <a href="mailto:Ramteke.a@interfleet.in">Ramteke.a@interfleet.in</a> |
| 4    | M/s ITALCERTIFIER S.p.A.,          | Largo Fratelli Alinari, 4-50123, Florence-Italy<br>Tele:+390550674606; Fax:+ 390550674598 Email: (i) <a href="mailto:c.carganico@italcertifer.com">c.carganico@italcertifer.com</a> (ii) <a href="mailto:r.mele@italcertifer.com">r.mele@italcertifer.com</a> (iii) <a href="mailto:l.rimassa@italcertifer.com">l.rimassa@italcertifer.com</a>                         |
| 5.   | M/s TUV Rheinland Inertraffic GmbH | Am Grauen Stein 51105 Koln Email: <a href="mailto:info@ind.tuv.com">info@ind.tuv.com</a>   |
| 6    | M/s ATKINS China Ltd.              | 13/F Wharf T&T Centre Harbour City Tsim Sha Tsui, Kowloon, Hongkong Tel: (852) 29721000, Fax:+3225485331, Email: (i) <a href="mailto:acl@atkins.com.hk">acl@atkins.com.hk</a> .  |
| 7.   | M/s S.A.Belgorail,                 | N.V., 60 RueRavenstein-1000 Brussels-1 ( Belgium)<br>Tele:+3225483760/62/63; Fax:+ 3225485331, Email: (i) <a href="mailto:jeanmarc.dupas@belgorail.be">jeanmarc.dupas@belgorail.be</a> (ii) <a href="mailto:info@belgorail.be">info@belgorail.be</a>   |
| 8.   | M/s CERTIFER:                      | 1, Place de Boussu- B.P. 70141-F 59416, ANZIN, France Tele:+ 33(0)327283500; Fax: +33 (0)3272835 09  |

|     |                                 |  |
|-----|---------------------------------|--|
|     |                                 | Email: <a href="mailto:pierre.kadziola@certifer.eu">pierre.kadziola@certifer.eu</a> (ii)<br><a href="mailto:Gabriel.decoopman@certifer.eu">Gabriel.decoopman@certifer.eu</a>   |
| 9.  | M/s SCONRAILUK Limited          | Chancery House, St. Nicholas Way, Sutton Surrey, England SMIJB, Tele:+ 44(0)2087703501 & +44208652 1890; Email: (i) <a href="mailto:sebastien.lechelle@sconrail.com">sebastien.lechelle@sconrail.com</a> (ii) <a href="mailto:certify@sconrail.ch">certify@sconrail.ch</a> |
| 10. | M/s Bureau Veritas Italia S.p.A | Edificio “caffa”- Darsena di Genova Via paoloimperiale, 4 16126 Genova, Tele: (+39) 010.586564, Fax: (+39) 010, 8604243, Email: <a href="mailto:tommaso.ghiara@it.bureauveritas.com">tommaso.ghiara@it.bureauveritas.com</a>   |

### C: For Generic Products used in Railway Signaling: 9 firms

| S.No | ISA Name                            | Address   |
|------|-------------------------------------|---|
| 1    | M/s Halcrow Rail Approvals Ltd.,    | Quarnmil House, Stores Road, Dearby DE21 4XF (UK) Tele:+ 44 (0) 1332223079, +44 (0) 1332223331, Email; <a href="mailto:mullinsd@halcrow.com">mullinsd@halcrow.com</a>   |
| 2    | M/s Interfleet Technology           | Interfleet House Pride Parkway, Dearby DE248HX, (U.K.) Tele: + 44(0) 1332223079, +91-22-42438796 (India); Fax:+ 1332223331 Email: (i) <a href="mailto:noble.i@interfleet.co.uk">noble.i@interfleet.co.uk</a> (ii) <a href="mailto:Philips.m@interfleetco.uk">Philips.m@interfleetco.uk</a> (iii) <a href="mailto:ramteke.a@interfleet.in">ramteke.a@interfleet.in</a> |
| 3    | M/s ITALCERTIFER                    | S.p.A. Largo Fratelli Alinari, 4-50123 Florence-Italy Tele: +390550674606; Fax: + 390550674598, Email: (i) <a href="mailto:c.carganico@italcertifer.com">c.carganico@italcertifer.com</a> (ii) <a href="mailto:r.mele@italcertifer.com">r.mele@italcertifer.com</a> (iii) <a href="mailto:l.rimasassa@italcertifer.com">l.rimasassa@italcertifer.com</a>              |
| 4    | M/s TUV Rheinland Inertraffic GmbH. | Am Grauen Stein 51105 Koln Email: <a href="mailto:info@ind.tuv.com">info@ind.tuv.com</a>  |
| 5    | M/s ATKINS China Ltd.               | 13/F WharfT&T Centre Harbour City Tsim Sha, Kowloon, Hongkong Tel: (852)29721000, Fax: (852) 2890 6343, Email: <a href="mailto:acl@atkins.com.hk">acl@atkins.com.hk</a>   |
| 6    | M/s S.A.Belgorail,                  | N.V.; 60 Rue Ravenstein-1000 Brussels-I ( Begium), Tele:+ 3225483760/62/63; Fax:+3225485331, Email: (i) <a href="mailto:jeanmare.dupas@belgorail.be">jeanmare.dupas@belgorail.be</a> (ii) <a href="mailto:info@belgorail.be">info@belgorail.be</a>  |
| 7    | M/s CERTIFER:                       | 1, PlacedBoussu-B.P 70141-F 59416, ANZIN, France Tele: +33(0) 327283500; Fax:+33(0) 327283509 Email: (i) <a href="mailto:pierre.kadziola@certifer.eu">pierre.kadziola@certifer.eu</a> (ii) <a href="mailto:Gabriel.decoopman@certifer.eu">Gabriel.decoopman@certifer.eu</a>   |
| 8    | M/s SCONRAIL UK Limited             | Chancery House, St. Nicholas Way, Sutton Survey England SMI IJB, Tele: +44(0)2087703501 & +44208652 1890; (i) <a href="mailto:sebastien.lechelle@sconrail.com">sebastien.lechelle@sconrail.com</a> (ii) <a href="mailto:certify@decoopman@certifer.eu">certify@decoopman@certifer.eu</a>  |
| 9    | M/s Bureau Veritas Italia S.p.A     | Edificio “caffa”-Darsena di Genova Via paoloimperiale, 4 16126 Genova, Tele: (+39)010, 586564, Fax (+39) 010, 8604243, Email: <a href="mailto:tommaso.ghiara@it.bureauveritas.com">tommaso.ghiara@it.bureauveritas.com</a>  |

3. You may submit your proposal either as a sole firm or as JV/Consortium. **In case of JV/Consortium, all the partners of the JV/Consortium ( pl. refer ITT2.3) shall be borne on the RDSO's panel of Independent Safety Assessors ( ISA).** It is not permissible to transfer this invitation to any other firm/entity.
4. **The entire work under scope shall be awarded to one bidder and splitting of work is not envisaged (refer ITT 2.9).**
5. A firm will be selected as per the procedures described in this RFP.
6. The Request for Proposals ( RFP) containing the documents as per para 6 below are being sent by email to the parties concerned. The Bid documents (RFP) can also be downloaded from the DFCCIL web site [www.dfccil.gov.in](http://www.dfccil.gov.in) .
7. The RFP includes the following documents:
  - Section 1 - Letter of Invitation
  - Section 2 - Instructions to Tenderers (including Data Sheet)
  - Section 3 - Technical Proposal - Sample Forms
  - Section 4 - Financial Proposal - Sample Forms
  - Section 5 - Terms of Reference.
  - Section 6 – Form of Contract
    - General Conditions of Contract
    - Special Conditions of Contract
  - Section 7 – Appendices for Guidance.
  - Section 8 - Key dates of STP5 and STP5A.
8. **Bid Security:** Your proposal must be accompanied with the Bid Security in the form of Bank Guarantee for a value of **INR 1,930,000/- (Rupees One Million Nine Hundred Thirty Thousands only)** in favor of “ Dedicated Freight Corridor Corporation of India Limited” payable at New Delhi (India). The bid security document shall be enclosed with the technical bid documents. It shall be noted that the proposals submitted without valid bid security shall be considered unresponsive and shall be summarily rejected. The Bank Guarantee shall be on prescribed format as given at Appendix J (Section 7) of this RFP and shall be from any Scheduled Commercial Bank Listed in Schedule II of the Reserve Bank of India Act, 1934 and shall remain valid for a period of 180 (one hundred and eighty) days from the date of submission of the Proposal. The validity of the Bid Security shall be extended for further period if requested by the Client. In case of JV/Consortium, the Bid security shall be a single instrument and shall be in the name of the JV/Consortium that submits the bid or from the lead partner as named in the JV/Consortium agreement.  
The bid security may be forfeited:
  - a. If the tenderer withdraws its bid during the period of bid validity.
  - b. If the successful tenderer fails to sign the contract.
  - c. If the successful tenderer fails to furnish performance guarantee as specified in TOR.
  - d. Any other reason /violation of various clauses of the RFP identified by Client.
9. **Cost of the Bid documents:** Your proposal must be accompanied with a crossed demand draft of Rs. 50,000/- (Rupees Fifty Thousand Only) being the cost of the Bid documents. The demand draft shall be drawn on any scheduled commercial bank listed in schedule II of the Reserve Bank of India Act 1934 payable to “Dedicated Freight Corridor Corporation of Indian Limited, New Delhi”. The Demand draft shall be enclosed with the Technical Bid documents.

10. The Bid security will be returned to the unsuccessful tenderers.
11. Please inform us in writing by **return Email** at the following address

**K. Madhusudan**  
**Group General Manager/S&T/WC-I,**  
**Dedicated Freight Corridor Corporation of India Ltd.,**  
**Room no 424, Pragati Maidan Metro Station Building Complex,**  
**New Delhi-110001**  
**INDIA**

|                  |                               |
|------------------|-------------------------------|
| <b>Telephone</b> | <b>+91-11-23379141</b>        |
| <b>Facsimile</b> | <b>+91-11-23454762</b>        |
| <b>e-mail</b>    | <b>kmadhusudan@dfcc.co.in</b> |

**Upon receipt:**

- (a) that you received the Letter of Invitation; and  
 (b) Request for Proposal (RFP).

Yours sincerely,

**K. Madhusudan**  
**Group General Manager/S&T/WC-I,**  
**Dedicated Freight Corridor Corporation of India Ltd.,**  
**Room no 424 (4<sup>th</sup> Floor),**  
**Pragati Maidan Metro Station Building Complex,**  
**New Delhi-110001**  
**INDIA**

|                  |                                |
|------------------|--------------------------------|
| <b>Telephone</b> | <b>+91-11-23379141</b>         |
| <b>Facsimile</b> | <b>+91-11-23454762</b>         |
| <b>e-mail</b>    | <b>kmadhusudan @dfcc.co.in</b> |

Note-To expedite communication It is essential that your (Authorized representative's) E mail address is conveyed to this office through return Email at the earliest.

## Section 2. - Instructions to Tenderers

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## **Instructions to Tenderers**

|                       |     |  |
|-----------------------|-----|--|
|                       |     | <b>A. General Provisions</b>   |
| <b>1. Definitions</b> | (a) | “Affiliate(s)” means an individual or an entity that directly or indirectly controls, is controlled by, or is under common control with the Tenderer.  |
|                       | (b) | “Applicable Law” means the laws and any other instruments having the force of law in the Client’s country, or in such other country as may be specified in the Data Sheet, as they may be issued and in force from time to time.                       |
|                       | (c) | “Client”/Employer means DFCCIL authority that signs the Contract for the Services with the selected Tenderer. It also includes any authority nominated by the Client as per Communication protocol to be issued by the Client after award of Contract. |
|                       | (d) | intentionally left blank.  |
|                       | (e) | “Contract” means a legally binding written agreement signed between the Client and the successful bidder and includes all the attached documents listed in paragraph 1 of the Form of Contract.  |
|                       | (f) | Data Sheet” means an integral part of the Instructions to Tenderers (ITT) Section 2 that is used to reflect specific country and assignment conditions to supplement, but not over-write, the provisions of the ITT.                                   |
|                       | (g) | “day” means calendar day.  |
|                       | (h) | “Engineer/PMC: The agency/person appointed by the Employer to act as the Engineer for the purpose of the contract STP5 and STP5A.  |
|                       | (i) | “Government” means the government of the Client’s country.   |
|                       | (j) | “ITT” (this Section 2 of the RFP) means the Instructions to Tenderers that provide the shortlisted Tenderers with all information needed to prepare their Proposals.   |
|                       | (k) | “Joint Venture/Consortium” means an association distinct from that of its members, of more than one Tenderer where one member has the authority to   |

|                        |     |   |
|------------------------|-----|---|
|                        |     | conduct all businesses for and on behalf of any and all members of the JV/consortium, and where the members of the JV/consortium are jointly and severally liable to the Client for the performance of the Contract.  |
|                        | (l) | “Key Expert(s)” means an individual professional whose skills, qualifications, knowledge and experience are critical to the performance of the Services under the Contract and shall include Assessors/DY Assessors/systems experts etc engaged for carrying out the proposed work. |
|                        | (m) | “LOI” (Section 1 of the RFP) means the Letter of Invitation being sent by the Client to the firms listed in the RDSO’s panel of ISA.  |
|                        | (n) | Intentionally left blank.   |
|                        | (o) | “Proposal” means the Technical Proposal or the Financial Proposal of the Tenderer, or both.   |
|                        | (p) | Intentionally left blank.   |
|                        | (q) | “RFP” means this Request for Proposals to be prepared by the Client for the selection of successful bidder.   |
|                        | (r) | “Services” means the work to be performed by the tenderer pursuant to the Contract.   |
|                        | (s) | Intentionally left blank.   |
|                        | (t) | “TOR” (Section 5 of the RFP) means the Terms of Reference that explains the objectives, scope of work, activities, and tasks to be performed, respective responsibilities of the Client and the successful bidder, and expected results and deliverables of the assignment.         |
|                        | (u) | “Tenderer/bidder/Consultant/ISA” means the entity or individual firm including a Joint Venture/Consortium that may provide or provides the Services to the Client under the Contract.   |
| <b>2. Introduction</b> |     |   |
|                        | 2.1 | The Client named in the Data Sheet will select a firm/organization from the tenderers, in accordance with the LCS method of selection.  |
|                        | 2.2 | ONLY the firms borne on the RDSO’s panel of Independent Safety Assessors (ISA) for Main line  |

|  |     |   |
|--|-----|---|
|  |     | <p>Signalling Projects/systems as well as for Generic products used in Railway Signalling and meeting the minimum eligibility criteria as laid down in Form TECH 3 are invited to submit a Technical Proposal and a Financial Proposal, for the proposed work mentioned in the Data sheet. The Proposal will be the basis for contract negotiations and ultimately for a signed Contract with the selected firm.</p> <p>The firms on the RDSO panel may authorise their Indian counterpart offices/representatives for ease in coordination and communication and participate in the bidding process on behalf of the ISA firm along with such letter of authorisation. However, it is made clear that the assessment, certification etc for the project shall be done by the firm on the RDSO panel and NOT by the Indian Representatives. The Client will enter into Contract only with the firm listed in the RDSO's panel and not with their Indian counterpart offices.</p> <p><b>Only the firms borne on the RDSO panel for Main line Signalling Projects/systems and for Generic products used in Railway Signalling either as sole firm or JV/consortium as mentioned in para 2.3 can only submit offer.</b></p> <p>Unsolicited offers shall be summarily rejected.</p> |
|  | 2.3 | <p>If the tenderer intends to quote for this work by forming a Joint venture/ consortium, then the Joint venture/consortium agreement shall identify the Lead partner/member. <b>The lead partner/member of the Joint venture/Consortium shall</b></p> <p><b>a) be borne on the RDSO's panel of Independent Safety Assessors (ISA) for Main line Signalling Projects/systems as well as for Generic products used in Railway Signalling as on the date of submission of bids and</b></p> <p><b>b) have maximum financial stake amongst the JV/consortium partners.</b></p> <p><b>The non lead partners shall also be borne on RDSO's panel of ISA for Main line Signalling Projects/systems OR for Generic products used in Railway Signalling.</b></p> <p>The tenderer shall submit a copy of the JV/Consortium agreement as per Appendix A, letter of participation from each member of JV/Consortium as per Appendix C, Power of Attorney in favour of the authorised signatory of JV/Consortium partners as per Appendix D and Power of Attorney to authorised representative</p>   |

|  |     |   |
|--|-----|---|
|  |     | <p>of the JV/Consortium as per Appendix E (Section 7) along with its technical proposal.</p> <p>The JV/Consortium through its authorised representative shall receive Instructions and payments from the Client for and on behalf of JV/Consortium.</p>   |
|  | 2.4 | <p>All the pages of the Bids shall be initialled by the Authorised representative of the firm/JV/Consortium signatory, stamped, serially numbered, Indexed and bound.</p>   |
|  | 2.5 | <p>All members in a Joint Venture/consortium shall sign the Proposal unless the lead member is nominated to do so in the power of attorney-</p>   |
|  | 2.6 | <p>For the purposes of this bid the “authorised signatory” shall mean the person authorised to sign on behalf of partner/firm under a Power of attorney (duly Notarised) and supported by resolution from the respective Board of directors.</p> <p>Lead partner shall represent all the partners of the JV/Consortium in discharging the obligations of the Joint venture/ Consortium. Accordingly the JV/ Consortium shall nominate one representative from the Lead partner, who shall have the authority to conduct all business for and on behalf of any and all the partners of the JV/Consortium, during the bidding process and in the event the Joint Venture/Consortium is awarded the contract, during contract execution. In this regard each of the JV/Consortium partners shall submit the Power of Attorney duly signed by their respective authorised signatory along with the Technical Bid.</p> <p>The Power of Attorney in respect of the Authorised Signatory of the respective partners, duly supported by their Board resolution shall also be submitted along with the Technical bid.</p> <p>Alternately a valid and current power of attorney to act on behalf of the company duly supported by authenticated evidence establishing authority of the person issuing the said power of attorney is also acceptable. A board resolution is one way of validating such authenticity. Other valid and authentic documentation confirming that the person issuing the power of attorney has the authority to do so, would also be acceptable. The documents should be submitted to the satisfaction of the Client who may also take legal opinion which will be binding.</p> |

|                                |      |  |
|--------------------------------|------|--|
|                                | 2.7  | The tenderer should familiarize themselves with the local conditions relevant to the Services and take them into account in preparing their Proposals, including attending a pre-proposal conference if one is specified in the Data Sheet. Attending the pre-proposal conference or opening of Technical or Financial proposals is optional and is at the Tenderer's expense. Clarifications and amendments to the RFP if any shall be issued as per para 8.1 of ITT.                   |
|                                | 2.8  | The Client will timely provide at no cost to the bidders, the inputs, relevant project data, and reports required for the preparation of the bidder's Proposal as specified in the Data Sheet.   |
|                                | 2.9  | The Client reserves the right NOT to utilize the services of the ISA for any of the Generic products after the award of the contract.  |
|                                | 2.10 | All reports/deliverables shall be the property of the Client. Further the Client reserves the right to use the Generic products certified by the ISA under this tender in other sections of DFCCIL/IR.   |
|                                | 2.11 | <p>The Letter of Invitation, Bid documents, reply to clarifications, corrigenda and addendums issued shall be emailed to all bidders and also uploaded on DFCCIL website (dfccil.gov.in). Tenderers are requested to check the website at frequent intervals for updates if any.</p> <p>Every email shall be promptly acknowledged by the receiving party.</p> <p><b>However, Uploading of any document on the DFCCIL website will be deemed to have been served to the bidders.</b></p> |
| <b>3. Conflict of Interest</b> |      |  |
| <b>Impartiality</b>            | 3.1  | The bidder is required to provide professional, objective, and impartial advice, at all times holding the Client's interests paramount, strictly avoiding conflicts with other assignments or its own corporate interests, and acting without any consideration for future work.   |

|                                 |     |  |
|---------------------------------|-----|--|
| <b>Conflict of Interest</b>     | 3.2 | <p>The bidder has an obligation to disclose to the Client any situation of actual or potential conflict that impacts its capacity to serve the best interest of its Client. Failure to disclose such situations may lead to the disqualification of the bidder or the termination of its Contract.</p> <p>Without limitation on the generality of the foregoing, and unless stated otherwise, the bidder shall not be hired under the circumstances set forth below:</p>           |
| <b>Conflicting Activities</b>   |     | (a) Conflict between ISA activities and of the procurement of goods or consulting/non-consulting services: The bidder that has been engaged to provide goods or consulting/non-consulting services for a project, or any of its affiliates, shall be disqualified from providing ISA services resulting from or directly related to those goods or consulting/non-consulting services.   |
| <b>Conflicting Assignments</b>  |     | (b) Conflict among consulting assignments: Neither a tenderer nor any of its affiliates shall be hired for any assignment that, by its nature, may be in conflict with another assignment of the tenderer. The tenderer ( firm or firms individually in case of a JV/consortium) or any of its affiliates should not have been involved in the other project related activities like general consultancy, tendering, design, testing for the project as defined in the data sheet. |
| <b>Conflicting Relationship</b> |     | (c) Relationship with Client's staff: A tenderer that has a close business relationship with the Client's professional personnel who are directly or indirectly involved in any part of: (i) the preparation of the Terms of Reference for the assignment, (ii) the selection process for the Contract, or (iii) the supervision of such Contract, shall be disqualified.  |
| <b>One Bid per Bidder</b>       |     | (d) Based on the "One Bid per Bidder" principle, which is to ensure fair competition, a firm and any affiliate that directly or indirectly controls, is controlled by, or is under common control with that firm shall not be allowed to submit more than one proposal, either individually as or as a member of a Joint Venture/consortium.   |
| <b>Others</b>                   |     | (e) Any other form of conflict of interest other than (a) through (d) of this ITT 3.2.   |

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| <b>4. Corrupt and Fraudulent Practices</b> | 4   | It is required that the tenderer and the Client observe the highest standard of ethics during the procurement and execution of such contracts. In pursuance of this policy DFCCIL;  |
|  |     | (a) will reject the result of evaluation of proposals if it determines that the tenderer evaluated as the highest-ranked has engaged in corrupt or fraudulent practices in competing for the contract in question;  |
|  |     | (b) will recognize a tenderer as ineligible, for a period determined by DFCCIL, to work with DFCCIL if it at any time determines that the tenderer has engaged in corrupt or fraudulent practices in competing  |
| <b>5. Eligibility</b>                      | 5.1 | <p>Government officials and civil servants of the Client's country are not eligible to be included as Experts in the tenderer's Proposal unless such engagement does not conflict with any employment or other laws, regulations, or policies of the Client's country, and they</p> <ul style="list-style-type: none"> <li>(i) are on leave of absence without pay, or have resigned or retired;</li> <li>(ii) are not being hired by the same agency they were working for before going on leave of absence without pay, resigning, or retiring</li> </ul> <p style="padding-left: 40px;">(in case of resignation or retirement, for a period of at least 6 (six) months, or the period established by statutory provisions applying to civil servants or government employees in the Client's country, whichever is longer. Experts who are employed by the government-owned universities, educational or research institutions are not eligible unless they have been full time employees of their institutions for a year or more prior to being included in tenderer's Proposal.; and</p> <ul style="list-style-type: none"> <li>(iii) their hiring would not create a conflict of interest.</li> <li>(iv) it is the tenderer's responsibility to ensure that its experts, key personnel and others employed/hired do not violate any of the relevant laws.</li> </ul> |



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|   | 5.2 | Tenderers shall ensure of their continued eligibility.   |
|   |     | <b>B. Preparation of Proposals</b>   |
| <b>6. Preparation of Proposals</b>            | 6.1 | In preparing the Proposal, the tenderer is expected to examine the RFP in detail. Material deficiencies in providing the information requested in the RFP may result in rejection of the Proposal.   |
|   | 6.2 | The tenderer shall bear all costs associated with the preparation and submission of its Proposal and contract negotiation. The Client is not bound to accept any proposal, and reserves the right to annul the selection process at any time prior to Contract award, without thereby incurring any liability to the tenderer. |
|   | 6.3 | The Proposal, as well as all related correspondence exchanged by the tenderer and the Client, shall be written in the language specified in the Data Sheet.  |
| <b>7. Proposal Validity</b>                   | 7.1 | The Data Sheet indicates the period during which the tenderer's Proposal must remain valid after the Proposal submission deadline.   |
|   | 7.2 | During this period, the tenderer shall maintain its original Proposal without any change, the proposed rates and the total price.  |
| <b>a. Extension of Validity Period</b>        | 7.3 | The Client will make its best effort to complete finalisation within this period. However, should the need arise, the Client may request, in writing, all Consultants to extend the validity period of their Proposals.  |
|   | 7.4 | Tenderer who do not agree have the right to refuse to extend the validity of their proposals in which case their Proposals will not be further evaluated.  |
| <b>b. Sub-Contracting</b>                     | 7.5 | The tenderer shall not subcontract the work.   |
| <b>8. Clarification and Amendments of RFP</b> |     |  |
| <b>a. Clarification of RFP</b>                | 8.1 | Tenderer may request a clarification of any of the RFP documents up to the number of days indicated in the Data Sheet before the proposal submission deadline  |

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|  |                            | date. Any request for clarification must be sent by means of communication as mentioned in Data sheet to the Client indicated in the Data Sheet. The Client will respond and will send copies of the response (including an explanation of the query but without identifying the source of inquiry) by the means of communication mentioned in data sheet to all tenderers. Should the Client deem it necessary to amend the RFP as a result of a clarification, it shall do so following the procedure under ITT 8.2.  |
| <b>b. Amendment of RFP</b>                                   | 8.2                        | The Client may amend the RFP by issuing an addendum by the means of communication as mentioned in Data sheet in sufficient time before the submission of Proposals. The addendum shall be sent to all tenderers and will be binding on them. The tenderers shall acknowledge receipt of all amendments by means of communication mentioned in data sheet. To give tenderers reasonable time in which to take an amendment into account in their Proposals the Client may, if the amendment is substantial, extend the deadline for the submission of Proposals. |
|  | 8.3                        | The tenderer may submit a modified Proposal or a modification to any part of it at any time prior to the proposal submission deadline. No modifications to the Technical or Financial Proposal shall be accepted after the deadline.  |
| <b>9. Preparation of Proposals – Specific Considerations</b> | 9                          | In the event that the tenderer is a Joint Venture/consortium, the tenderer shall submit documents as mentioned in ITT2.3 with its Technical Proposal attached to TECH-1, Standard Forms (Section 3) and submitted as part of the Technical Proposal of such tenderer.   |
| <b>10. Technical Proposal Format and Content</b>             | 10.1                       | The Technical Proposal shall provide the information indicated in the following paragraphs from (i) to (v) using the attached Standard Forms (Section 3). The following table summarizes the content and recommended number of pages. A page is considered to be one printed side of A4 or letter size paper.   |
|  | Experience of the tenderer | <p>(i) about two (2) pages introducing the tenderers organization and general experience (Form TECH- 2A).</p> <p>(ii) about five (5) pages of relevant completed projects illustrating the tenderer's relevant</p>  |

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|   |  | experience (Form TECH-2B). No promotional material should be included.  |
|   | General approach and methodology, Preliminary Safety assessment plan for performing assignment as per TOR. | (Form TECH-4 & 5).  |
|   | List of proposed team composition and task assigned to them along with CV particulars.                     | (Form TECH- 6)  |
|   | 10.2   | The Technical Proposal shall not include any financial information. A Technical Proposal containing material financial information shall be declared <i>non responsive</i> .  |
|   | 10.3   | The documents towards Bid security and the Cost of the Bid documents as per para 8 and para 9 of Letter of Invitation shall be enclosed with the Technical proposal. Proposals unaccompanied with the above documents shall be declared <i>non responsive</i> .   |
|   | 10.4   | The Bid documents issued along with addenda ( if any) shall be submitted duly initialled by authorised signatory and stamped along with the Technical proposal.   |
| <b>11. Financial Proposals Format and Content</b> | 11.1   | (i) The Financial Proposal shall be prepared using the Standard Forms provided in Section 4 of the RFP. The foreign currencies shall be as mentioned in Data sheet.   |
|   | (ii)   | The financial proposal should be separately completed and submitted in a separate sealed envelope clearly labelled "FINANCIAL PROPOSAL". The prices entered into the form of tender shall include all costs associated with the contract. These will cover remuneration for staff and their expenses, transportation, lodging, equipment, printing of documents, surveys and others incidentals etc required for successful completion of the work. No adjustment will be made for inflation and any fluctuation in the exchange rates between Indian Rupees and other currencies. The financial proposal should be prepared using, but not limited to, the formats attached in Section 4 of RFP. |

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|  | (iii) | <p>The tenderer should quote fixed lump sum all inclusive price in Local Currency (INR) and in Foreign Currency (FC) where ever required keeping in view the stage payment schedule described in Section 4 of the RFP with Local service taxes shown separately as per FORM FIN1A.</p> <p>This Contract is a fixed Lump Sum priced Contract for Independent Safety Assessment. <b>The contract price shall be fixed throughout the performance of the contract and not subject to variation</b> on any account except as provided for in the Contract.</p>  |
|  | 11.2  | <p>(a) The contractor, key experts and their personnel are responsible for meeting all tax liabilities arising out of the contract.</p> <p>(b) Information on taxes in the Client's country is provided in the Data sheet.</p> <p>(c) Local service taxes will be excluded in the financial evaluation and applicable amounts will be included in the Contract.</p> <p>(d) All payments shall be subject to tax deduction at source in accordance with the provisions of the Indian Income Tax act and any other applicable law. The contractor shall ensure full compliance with tax laws of India with regard to this contract and shall be solely responsible for the same. He shall submit copies of acknowledgements evidencing filing of returns every year and shall keep the employer fully indemnified against liability of tax, interest, penalty etc of the contractor in respect thereof, which may arise.</p> <p>e) The contractor should obtain necessary certificate from the Assessing Officer, under the relevant provisions of the Income Tax Act of India, for the rate at which income tax is to be deducted from the payments made to him. Pending submission of such certificate, Client will deduct income tax at source as per applicable provisions under the Income Tax act. The contractor may, therefore, submit the certificate before the payment becomes due.</p> <p>f) The tender total submitted by the tenderer shall be in the format shown in the Pricing document.</p> <p>g) The pricing document completed and submitted by the tenderer, as part of his tender, should use an indexing and page numbering system such that its extent and completeness is clearly evident.</p> |
|  | 11.3  | <p>Payments under the contract shall be made in the currency or currencies in which the Financial proposal of the selected tenderer is expressed.</p>   |

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|  |      | <b>C. Submission, Opening and Evaluation</b>   |
| <b>12. Submission, Receipt, and Opening of Proposals</b> | 12.1 | The tenderer shall submit a signed and complete Proposal comprising the documents and forms in accordance with ITT 10 and 11. The submission can be <b>done by post or by hand</b> . The Indian representative duly authorised by the tendering firm is permitted to submit the bid prepared by the firm on RDSO approved panel.   |
|  | 12.2 | The original Proposal shall contain no interlineations or overwriting, except as necessary to correct errors made by the tenderers themselves. The person who signed the proposal must initial such corrections. Submission letters for both Technical and Financial Proposals should be in the format of TECH-1 of Section 3 and FIN-1 of Section 4, respectively, including required attachments, if any. [See ITT 9 above.].  |
|  | 12.3 | The Technical Proposal shall be marked "ORIGINAL" or "COPY" as appropriate. Copies of the Technical Proposal shall be prepared in the number indicated in the Data Sheet. All required copies of the Technical Proposal are to be made from the original. If there are discrepancies between the original and the copies of the Technical Proposal, the original governs.  |
|  | 12.4 | The authorized representative of the tenderers shall initial all pages of Financial Proposals. The authorization shall be in the form of a written power of attorney accompanying the Proposal or in any other form demonstrating that the representative has been duly authorized to sign. The signed Financial Proposal shall be marked "ORIGINAL."  |
|  | 12.5 | The original and all copies of the Technical Proposal shall be placed in a sealed envelope clearly marked "TECHNICAL PROPOSAL." Similarly, the original Financial Proposal shall be placed in a sealed envelope clearly marked "FINANCIAL PROPOSAL" and the name of the assignment, and with a warning <b>"DO NOT OPEN WITH THE TECHNICAL PROPOSAL."</b> The envelopes containing the Technical and Financial Proposals shall be placed into an outer envelope and sealed. This outer envelope shall bear the submission address, reference number and be clearly marked <b>"DO NOT OPEN, EXCEPT IN PRESENCE OF THE OFFICIAL APPOINTED, BEFORE</b> [insert the time and date of the submission |

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|   |      | deadline indicated in the Data Sheet]”. The Client shall not be responsible for misplacement, losing or premature opening if the outer envelope is not sealed and/or marked as stipulated. This circumstance may be cause for Proposal rejection. If the Financial Proposal is not submitted in a separate sealed envelope duly marked as indicated above, this will constitute grounds for declaring the Proposal non-responsive.  |
|   | 12.6 | The Proposals must be sent to the address/addresses indicated in the Data Sheet and received by the Client no later than the time and the date indicated in the Data Sheet, or any extension to this date in accordance with ITT 8.2. Any proposal received by the Client after the deadline for submission shall be returned unopened.   |
| <b>13. Substitution and Modifications</b> | 13.1 | No substitution /modifications shall be allowed once the proposal is submitted.   |
| <b>Withdrawals</b>                        | 13.2 | The tenderers can withdraw their Proposal after it has been submitted by sending a written notice, duly signed by an authorized representative. The notice must be:   |
|   |      | (a) received by the Client prior to the deadline prescribed for submission of Proposal, in accordance with ITT 12.6.<br>(b) bids withdrawn shall be returned unopened to the Bidders.   |
|   | 13.3 | The Client shall open the Technical Proposals immediately after the deadline for their submission. The envelopes with the Financial Proposals shall remain sealed and securely stored.  |
| <b>14. Proposal Evaluation</b>            | 14.1 | (a) Except for the written communications for clarification of the Proposals, from the time the Proposals are opened to the time the Contract is awarded, the tenderers should not contact the Client on any matter related to its Technical and Financial Proposal. Any effort by tenderer/s to influence the Client in the examination, evaluation, ranking of Proposals and recommendation for award of Contract may result in the rejection of the tenderers’ Proposal. |
|   |      | (b) The evaluators of Technical Proposals shall have no access to the Financial Proposals until the technical evaluation is concluded. However they may reply to the queries of the Client if any.  |

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| <b>a. Evaluation of Technical Proposals</b>     | 14.2 | The evaluation committee shall evaluate the Technical Proposals on the basis of their responsiveness to the RFP and the firm meeting the Minimum Eligibility Criteria as per Technical proposal submission Form TECH 3.  |
|   | 14.3 | <p>(a) To assist in the examination, evaluation and the comparison of the Technical and Price bids and the qualification of the bidders, the Client may, at its discretion, ask any tenderer for a clarification of its bid mentioning the date by which the reply is required. Any clarification submitted by the tenderer that is not in response to the request by the Client shall not be considered. The Client's request for clarification and the response shall be in writing. No change in the substance of the technical bid or the Prices in the price Bid shall be sought offered or permitted.</p> <p>(b) if the tenderer does not provide the required clarifications by the date set in by the Client as per para above, the offer may be rejected.</p> |
|   | 14.4 | After the technical evaluation is completed, the Client will notify those tenderers whose Proposals were not found suitable or were considered non-responsive to the RFP, and return their Financial Proposals unopened.   |
| <b>b. Public Opening of Financial Proposals</b> | 14.5 | The Client shall simultaneously notify in writing tenderers whose bids have been found suitable for opening of the Financial Bids, indicating the date, time and location for opening the Financial Proposals. The expected date for the public opening of the Financial Proposals is indicated in the Data Sheet; the opening date should allow tenderer sufficient time to make arrangements for attending the opening. Tenderers' attendance at the opening of Financial Proposals is optional.   |
|   | 14.6 | Financial Proposals shall be opened in the presence of the tenderers' representatives who choose to attend. The name of the tenderer shall be read aloud. The Financial Proposal of the tenderers who are found eligible will then be inspected to confirm that they have remained sealed and unopened. These Financial Proposals shall be then opened, and the total prices read aloud and recorded.  |
| <b>c. Correction of Errors</b>                  | 14.7 | The fixed Lump Sum Price stated by the Tenderer in words (in the Letter of Price offer FIN-1) shall prevail. If arithmetical errors are discovered in the  |



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|   |       | <p>apportionment of this amount into various activities/Sections, Cost Centres and/or Milestones etc, (FIN 1A, FIN 3) corrections will be made by the Client proportionately to the amounts shown against the relevant Sections, Cost Centres and/or Milestones so that the sum total of all milestones in all Sections, Cost Centres is equal to the Fixed Lump Sum Price stated in words. If the tenderer does not accept the corrected tender his Tender will be rejected, and the Tender Guarantee forfeited.</p> <p>Where there is a discrepancy between the amounts in figures and in words, the amount in words will govern.</p>  |
| <p><b>d. Conversion to Single Currency for Evaluation of Tender</b></p> | 14.8  | <p>The decision of the Client in all such cases shall be final. <b>The tenderers therefore are advised to ensure that there is no ambiguity in the rates.</b></p>  |
|   | 14.9  | <p>Tenderer will be evaluated in Indian Rupees only. This will be achieved by converting the foreign currency portion into Indian Rupees at the selling rate of exchange at the close of business of the Reserve Bank of India on the day 28 days before the latest date of tender submittal and then adding the same to the Rupee portion of the tender.</p>  |
| <p><b>e. Evaluation of Financial Proposal</b></p>                       | 14.10 | <p>Evaluation of Reasonableness of Rates</p> <p>The financial proposal will be evaluated only of those bidders who have qualified the technical evaluation stage.</p> <p>The financial proposal will be evaluated as per financial document submitted.</p> <p>The tenderer should submit his financial package without any conditions, qualifications, deviations etc to the tender documents.</p> <p><b>No alternate offers to the clauses in the RFP shall be accepted.</b></p> <p>In evaluating the tenders, the Employer will determine for each Evaluated Tender Price by adjusting the tender price by making any corrections for errors pursuant to clause 14.7.</p> <p>The evaluated price thus obtained shall be compared amongst various Tenderers to determine the lowest evaluated tender.</p> |



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|   |      | <b>D. Negotiations and Award</b>  |
| <b>15. Negotiations</b>                   | 15.1 | The Client reserves the right to conduct negotiations on the Cost of the services. The negotiations ( if any) will be held at the date and address indicated in the Data Sheet with the tenderer's representative(s) as identified in 14.10 who must have written power of attorney to negotiate and sign a Contract on behalf of the tenderer. |
|   | 15.2 | The Client shall prepare minutes of negotiations that are signed by the Client and the tenderer's authorized representative.  |
| <b>16. Conclusion of the negotiations</b> | 16.1 | Negotiations will conclude with the Client and the tenderer signing the negotiated offer.   |
|   | 16.2 | The Client reserves the right to either accept or reject or modify. The Client may or may not award the work. The decision of the Client is final and binding.  |
| <b>17. Award of Contract</b>              | 17.1 | The Client shall award the Contract to the selected tenderer and return the bid security of the other tenderers who have submitted proposals.   |
|   | 17.2 | The Joint Venture agreement of the successful bidder (if applicable) should be registered in Delhi/New Delhi prior to signing of the Contract Agreement so as to be legally valid and binding on partners/members of the JV. The registration charges/duties of such registration (if any) shall be borne by the JV.                            |
|   | 17.3 | The Consultant is expected to commence the Services on the date and at the location specified in the Data Sheet.<br><br>Until a formal contract is prepared and executed, the Letter of Acceptance shall constitute a binding contract.   |

## Section 2 – Instructions to Tenderers (ITT)

### Data Sheet

| Paragraph Reference |   |
|---------------------|---|
| <b>Definitions</b>  | <p>“Government” means Government of India<br/> “DFCCIL” means Dedicated Freight Corridor Corporation of India Limited<br/> “MOR” means Ministry of Railway<br/> “IR” means Indian Railways<br/> “IRS” means Indian Railway Standards</p>  |
| <b>2.1</b>          | <p>Name of the Client: Dedicated Freight Corridor Corporation of India Limited (DFCCIL)</p>   |
| <b>2.2</b>          | <p>Name of the assignment is: Independent Safety Assessment Services for Signalling System including TPWS for Western Dedicated Freight Corridor between Rewari to Makarpura (Phase-I) and for Signalling Generic Products.</p>   |
| <b>2.7</b>          | <p>A pre-proposal conference will be held: <b>Yes</b></p> <p><b>Venue</b> Board Room, DFCCIL Office, 4<sup>th</sup> Floor, Pragati Maidan Metro Station Building Complex, New Delhi – 110001, India</p> <p><b>Date</b> November 9<sup>th</sup>, 2016<br/> <b>Time</b> 1500 hrs ( 3:00 PM) IST</p> <p><b>Client’s Representative Address</b> K Madhusudan<br/> K Madhusudan<br/> GGM/S&amp;T/WC-I<br/> Room no 424, DFCCIL Office, 4<sup>th</sup> Floor, Pragati Maidan Metro Station Building Complex, New Delhi – 110001, India</p> <p><b>Telephone</b> ++91-11-23379141<br/> <b>Facsimile</b> +91-11-23454762<br/> <b>e-mail</b> <a href="mailto:kmadhusudan@dfcc.co.in">kmadhusudan@dfcc.co.in</a></p> |
| <b>2.8</b>          | <p>The Employer will provide the following inputs, project data, reports, etc. to facilitate the preparation of the Proposals: The General specifications of STP5/STP5A, Particular specification part I (Signalling system) of</p>   |

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|                      | <p>STP5, particular specification of STP5A and sketch of the section. These documents can be downloaded from DFCCIL web site (dfccil.gov.in).</p> <p><b>Note:</b> The word 'New' appearing as prefix to the names of the stations in the sketch of the section, is meant to refer to the DFCCIL alignment.</p>   |
| <b>3.2(b)</b>        | <p>Project, as implied for this para, means the Western Dedicated Freight Corridor being constructed by DFCCIL in the section Rewari to Makarpura and shall also include interfacing works with adjoining sections of Western Corridor (i.e. Dadri-Rewari and Makarpura-JNPT). Sketch showing the section Dadri-Rewari-Makarpura-JNPT is attached.</p>   |
| <b>6.3</b>           | <p>Proposals shall be submitted in the following languages: <b>English</b></p>   |
| <b>7.1</b>           | <p>Proposal must remain <b>valid up to 180 days</b> from the date and time notified for opening of Technical bids.</p>   |
| <b>8.1</b>           | <p>Clarifications may be requested not later than <b>15 (Fifteen)</b> days before the submission deadline date. Replies to clarifications shall be given not later than <b>10 (Ten)</b> days before submission deadline date.</p>  |
| <b>8.1 &amp; 8.2</b> | <p><b>Means of Communication for 8.1 and 8.2:</b> shall be by E-Mails. The email of the client is <a href="mailto:kmadhusudan@dfcc.co.in">kmadhusudan@dfcc.co.in</a>. The emails of the RDSO approved parties shall be as listed in the RDSO's letter STS/E/ISA-VOL.III dtd 7/12/2015 and/or the authorised representative's email address conveyed to this office.</p> <p><i>The reply to clarifications, corrigenda and addendums issued shall be emailed to all bidders and also uploaded on DFCCIL website (dfccil.gov.in). Tenderers are requested to check the website at frequent intervals for updates if any.</i></p> |
| <b>11.1(i)</b>       | <p>Tenderers may express the price of their services in Internationally traded currencies, singly or in combination with a maximum of <b>TWO</b> currencies.</p>   |
| <b>11.2(a)</b>       | <p>The local service tax and the Cess on the Service tax as applicable shall be borne by the Client. The Client shall reimburse the service tax, to the contractor against proof of payment. All other taxes and duties shall be borne by the Contractor. Statutory variations if any will be paid/reimbursed by the Client.</p>   |
| <b>12.3</b>          | <p>Number of copies of the Technical Proposal: <u>One Original Plus Two Hard Copies + Two Soft Copies in CDs</u></p>   |
| <b>12.5</b>          | <p>Time and date of the Proposal submission deadline:</p> <p>Date <b>28<sup>th</sup> November 2016</b></p> <p>Time <b>15:00 Hrs (3:00 PM IST)</b></p>  |
| <b>12.6</b>          | <p>Tenderer must submit the original and all copies of the Technical Proposal, and the original Financial Proposal to the Client to the following address:</p>   |

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|             | <p><b>Address</b></p> <p><b>K Madhusudan<br/>GGM/S&amp;T/WC-I<br/>Room no 424, DFCCIL Office,<br/>4<sup>th</sup> Floor, Pragati Maidan Metro Station<br/>Building Complex,<br/>New Delhi – 110001, India</b></p> <p>Proposals must be submitted no later than the following date and time:<br/>Date <b>28<sup>th</sup> November 2016</b><br/>Time <b>15:00 Hrs (3:00 PM IST)</b></p> |
| <b>14.5</b> | <p>Expected date (month/year) for public opening of Financial Proposals:</p> <p><b>Date</b> <b>Shall be intimated.</b><br/><b>Location</b> <b>New Delhi</b></p>  |
| <b>15.1</b> | <p>Expected date and address for contract negotiations:</p> <p><b>Address</b> <b>Board Room,<br/>DFCCIL Office,<br/>4<sup>th</sup> Floor, Pragati Maidan<br/>Metro Station Building Complex,<br/>New Delhi – 110001, India</b></p> <p>Date <b>shall be intimated ( if any)</b></p>   |
| <b>17.3</b> | <p>Expected date for commencement of consulting services</p> <p>Date <b>Date of issue of provisional letter of acceptance.</b><br/>Location <b>As per TOR.</b></p>   |

## **Section 3. Technical Proposal - Standard Forms**

### **Notes on Technical Proposal - Standard Forms**

Section 3. Technical Proposal – Standard Forms provides Technical Forms that the Client shall include in its Request for Proposal. Tenderers shall fill these Forms and include them in their proposals. As specified in this section, these forms are the Technical Proposal Submission Forms and other relevant Technical Proposal Forms.

Italicized notes provide guidance for the preparation of the Technical Proposals; they should not appear on the Technical Proposals to be submitted.

Refer to ITT 10.1 for Forms required.

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## Form TECH-1: Technical Proposal Submission Form

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[Location, Date]

To: [Name and address of Client]

Dear Sirs:

We, the undersigned, offer to provide the Assessment services for [Insert name of assignment] in accordance with your Request for Proposals dated [Insert Date] and our Proposal. [Select appropriate wording depending on the selection method stated in the RFP: “We are hereby submitting our Proposal, which includes this Technical Proposal and a Financial Proposal sealed in a separate envelope”].

[If the tenderer is a joint venture/Consortium, insert the following: We are submitting our Proposal as a joint venture/Consortium with: [Insert a list with full name and the legal address of each member, and indicate the lead member]. We have attached a copy of the JV agreement/Consortium Agreement signed by every participating member, which details the legal structure of and the confirmation of joint and severable liability of the members of the said joint venture. The lead member/partner is authorised to incur liabilities, receive payments and receive instructions for and on behalf of any or all partners of the Joint venture.

We hereby declare that:

- (a) All the information provided and statements made in this Proposal are true and we accept that any misinterpretation or misrepresentation contained in this Proposal may lead to our disqualification by the Client.
- (b) Our Proposal shall be valid and remain binding upon us for the period of time specified in the Data Sheet, Clause 7.1.
- (c) We have no conflict of interest in accordance with ITT 3.
- (d) We meet the conditions as stated in ITT 5.
- (e) We meet the Minimum Eligibility Criteria laid down in TECH 3 and have enclosed required documentary evidence thereof.
- (f) Our Proposal is binding upon us and subject to any mutually agreed modifications resulting from the Contract negotiations.
- (g) We are in full comprehension of and agree to comply with RFP Provisions and ‘addenda issued there after (if any)’ and it is certified that our proposal contains no deviation from RFP Provisions and in case of any deviation/mismatch between RFP provision and content of our Proposal- being subsequently

noticed, original RFP Provision read with Addenda issued there after (if any) shall prevail.

We understand that the Client is not bound to accept any Proposal that the Client receives.

We remain,

Yours sincerely,

Authorized Signature [*in full and initials*]: \_\_\_\_\_

Name and Title of Signatory: \_\_\_\_\_

Name of Tenderer [*firm's name or JV's/Consortium's name*]: \_\_\_\_\_

In the capacity of: \_\_\_\_\_

Address: \_\_\_\_\_

Contact information [*phone and e-mail*]: \_\_\_\_\_

[*For a joint venture/Consortium, either all members shall sign or only the lead member, in which case the power of attorney to sign on behalf of all members shall be attached*]



## **Form TECH-2: Tenderer's Organization and Experience**

---

### **I - Tenderer's Organization TECH 2A**

*[Provide here a brief (two pages) description of the organization and general experience of the Tenderer and, where applicable, of each joint venture/Consortium member for this assignment. Financial reports of the firm/all firms individually of JV/Consortium for the preceding three years excluding the current year to be enclosed.]*

## II - Tenderer's Experience TECH 2B

*[Using the format below, provide information on each assignment for which your firm and each joint venture/Consortium member for this assignment, was legally contracted either individually as a corporate entity or as a lead firm or one of members within a joint venture/Consortium, for carrying out assessment services similar to the ones requested under this assignment.]*

|   |   |
|---|---|
| Assignment name:  | Approx. value of the contract (in current US\$ or Euro):  |
| Country:<br>Location within country:                            | Duration of assignment (months):  |
| Name of Client:   | Total No. of man-days of the assignment:  |
| Address:  | Approx. value of the services provided by your firm under the contract (in current US\$ or Euro): |
| Start date (month/year):<br>Completion date (month/year):       | No. of professional man-days provided by the joint venture members or key experts:-               |
| Name of joint venture/Consortium member or key experts, if any: |   |
| Narrative description of Project:                               |   |
| Description of actual services provided in the assignment:      |   |

Tenderer's Name: \_\_\_\_\_

## FORM OF TECH 3

### MINIMUM ELIGIBILITY CRITERIA

(Refer Clause 14.2 of ITT)

Name of Tenderer: .....

| No. | Criterion  | Yes | No |
|-----|--|-----|----|
| 1   | Has the Tenderer <sup>1</sup> abandoned any work in the last 3 years?  |     |    |
| 2   | Has the Tenderer <sup>1</sup> been blacklisted by any organization in the last three years?  |     |    |
| 3   | Has the Tenderer <sup>1</sup> been penalized for poor quality of work in the last 3 years?   |     |    |
| 4   | Has any agent/ middleman been engaged or will be engaged or has any agency or has any agency commission been or will be paid for this work?  |     |    |
| 5A  | Is the Tenderer <sup>2</sup> empanelled in RDSO's Panel of ISA for Main Line Signalling Projects/ Systems AND Generic products used in Railway Signalling as on the date of tender submission?                                 |     |    |
| 5B  | Has the Tenderer <sup>1</sup> got valid accreditation under scope of ISO/IEC 17065 on the date of submission of the offer?   |     |    |
| 6   | Has the Tenderer submitted Preliminary Safety assessment plan along with the offer (Refer para 11.1(1) of TOR).  |     |    |
| 7   | Is the Tenderer complying with clause 3.2 of ITT.  |     |    |
| 8   | Has the Tenderer <sup>2</sup> successfully completed atleast TWO works of Independent safety assessment/audit of Train control and Signalling systems in the past SEVEN years (User certificates from client to be submitted). |     |    |

<sup>1</sup>In case of JV/ Consortium, each member individually.

<sup>2</sup>In case of JV/Consortium, lead member.

Signed by Authorized Representative of the Tenderer

**Note:** 1. A “YES” answers to the question 1 to 4 will disqualify the tenderer; A “No” answers to question 5A, 5B, 6, 7 and 8 will disqualify the tenderer.

2. Documentary evidences to be submitted in support of 5B and 8.

## **Form TECH-4: Description of Approach, Methodology and Work Plan for Performing the Assignment as per TOR.**

*[Technical approach, methodology and work plan are key components of the Technical Proposal. You are suggested to present your Technical Proposal divided into the following three chapters:*

- a) Technical Approach and Methodology,*
  - b) Preliminary Safety assessment plan and Work Plan, and*
  - c) Organization and Staffing,*
- 
- a) Technical Approach and Methodology. In this chapter you should explain your understanding of the objectives of the assignment, approach to the services, methodology for carrying out the activities and obtaining the expected output, and the degree of detail of such output in relation to TOR.*
  - b) Preliminary Safety Assessment plan and Work Plan. In this chapter you should propose the main activities of the assignment, their content and estimation of total man days required along with duration, phasing as per mile stones detailed in Section 8, interrelations and delivery dates of the reports. The proposed work plan should be consistent with the technical approach and methodology, showing understanding of the TOR and ability to translate them into a feasible working plan. FORM TECH 5 may be seen. A preliminary list of the installations proposed to be audited during the various phases of the Project shall be included.*
  - c) Organization and Staffing. In this chapter you should propose the structure and composition of your team. You should list the main disciplines of the assignment, the Key Experts and proposed technical and administrative support staff.*
  - d) Minimum man day requirement: This may be filled in the form enclosed.*

## **FORM Tech 4 ( Contd...)**

The tenderer must fill and submit the minimum number of man days in the below format:

### **(a) For Signalling System**

| sno | Activity  | Category      | Minimum number of Man Days |        |
|-----|---|---------------|----------------------------|--------|
|     |   |               | Signalling System          |        |
|     |   |               | Expat                      | Indian |
| 1   | Safety Assessment plan (Para 11.1 of TOR)                                 | PM/Assessor   |                            |        |
|     |   | Dy. Assessor  |                            |        |
|     |   | System Expert |                            |        |
|     |   | Secretary     |                            |        |
| 2   | Assessment of Contractor's plan (Para 11.2 of TOR)                        | PM/Assessor   |                            |        |
|     |   | Dy. Assessor  |                            |        |
|     |   | System Expert |                            |        |
|     |   | Secretary     |                            |        |
| 3   | Design assessment (Para 11.3 of TOR)                                      | PM/Assessor   |                            |        |
|     |   | Dy. Assessor  |                            |        |
|     |   | System Expert |                            |        |
|     |   | Secretary     |                            |        |
| 4   | Assessment of Manufacturing and Installation plans (Para 11.4 of TOR)     | PM/Assessor   |                            |        |
|     |   | Dy. Assessor  |                            |        |
|     |   | System Expert |                            |        |
|     |   | Secretary     |                            |        |
| 5   | Engineering Safety validation activities (Para 11.5.1 of TOR)             | PM/Assessor   |                            |        |
|     |   | Dy. Assessor  |                            |        |
|     |   | System Expert |                            |        |
|     |   | Secretary     |                            |        |
| 6   | Engineering Safety Validation Case Safety assessment (Para 11.5.2 of TOR) | PM/Assessor   |                            |        |
|     |   | Dy. Assessor  |                            |        |
|     |   | System Expert |                            |        |
|     |   | Secretary     |                            |        |
| 7   | O&M process Assessment (Para 11.6 of TOR)                                 | PM/Assessor   |                            |        |
|     |   | Dy. Assessor  |                            |        |
|     |   | System Expert |                            |        |
|     |   | Secretary     |                            |        |
| 8   | Trial running Tests Assessment (Para 11.7 of TOR)                         | PM/Assessor   |                            |        |
|     |   | Dy. Assessor  |                            |        |
|     |   | System Expert |                            |        |
|     |   | Secretary     |                            |        |
| 9   | Final Safety Assessment for Signalling System for                         | PM/Assessor   |                            |        |
|     |   | Dy. Assessor  |                            |        |

|    |  |               |  |  |
|----|--|---------------|--|--|
|    | use in DFCCIL (Para 14.2 of TOR)                         | System Expert |  |  |
|    |  | Secretary     |  |  |
| 10 | Quarterly/Monthly progress report (Para 12.6, 13 of TOR) | PM/Assessor   |  |  |
|    |  | Dy. Assessor  |  |  |
|    |  | System Expert |  |  |
|    |  | Secretary     |  |  |

**(b) For Electronic Interlocking**

| sno | Activity   | Category      | Minimum number of Man Days |        |
|-----|--|---------------|----------------------------|--------|
|     |  |               | Expat                      | Indian |
| 1   | Safety Assessment Report for   | PM/Assessor   |                            |        |
|     | (i) Type test & trial  | Dy. Assessor  |                            |        |
|     | (ii) Field trial   | System Expert |                            |        |
|     | (iii) Cross Acceptance/ Approval for Use on DFCCIL. (Para 12.3 of TOR)                           | Secretary     |                            |        |
| 2   | Final Safety Assessment Report for Electronic Interlocking for use in DFCCIL. (Para 14.1 of TOR) | PM/Assessor   |                            |        |
|     |  | Dy. Assessor  |                            |        |
|     |  | System Expert |                            |        |
|     |  | Secretary     |                            |        |

**(c) For MSDAC**

| sno | Activity   | Category      | Minimum number of Man Days |        |
|-----|--|---------------|----------------------------|--------|
|     |  |               | Expat                      | Indian |
| 1   | Safety Assessment Report for   | PM/Assessor   |                            |        |
|     | (i) Field trial  | Dy. Assessor  |                            |        |
|     | (ii) Cross Acceptance/ Approval for Use on DFCCIL. (Para 12.3 of TOR)                            | System Expert |                            |        |
|     |  | Secretary     |                            |        |
| 2   | Final Safety Assessment Report for Electronic Interlocking for use in DFCCIL. (Para 14.1 of TOR) | PM/Assessor   |                            |        |
|     |  | Dy. Assessor  |                            |        |
|     |  | System Expert |                            |        |
|     |  | Secretary     |                            |        |

**(d) For TPWS**

| sno | Activity  | Category      | Minimum number of Man Days |        |
|-----|---|---------------|----------------------------|--------|
|     |   |               | Expat                      | Indian |
| 1   | Safety Assessment Report for<br>(i) Type test & trial<br>(ii) Field trial<br>(iii) Cross Acceptance/ Approval for Use on DFCCIL<br>(Para 12.3 of TOR) | PM/Assessor   |                            |        |
|     |   | Dy. Assessor  |                            |        |
|     |   | System Expert |                            |        |
|     |   | Secretary     |                            |        |
| 2   | Final Safety Assessment Report for Electronic Interlocking for use in DFCCIL<br>(Para 14.1 of TOR)  | PM/Assessor   |                            |        |
|     |   | Dy. Assessor  |                            |        |
|     |   | System Expert |                            |        |
|     |   | Secretary     |                            |        |

**Note:**

1. While arriving at the “minimum Man day requirement”, Phased commissioning as mentioned in key dates enclosed in Section 8 to be kept in mind.
2. The designations of Key and non key experts as mentioned above are indicative. The Tenderer may use the suitable designations against each of them.

## FORM TECH-5

### WORK SCHEDULE AND PLANNING FOR DELIVERABLES

| No         | Deliverables <sup>1</sup> (D-..)       | Months |   |   |   |   |   |   |   |   |      |   |       |
|------------|--|--------|---|---|---|---|---|---|---|---|------|---|-------|
|            |  | 1      | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | .... | n | TOTAL |
| <b>D-1</b> | {e.g., Deliverable #1: Report 1        |        |   |   |   |   |   |   |   |   |      |   |       |
|            | 1) data collection                     |        |   |   |   |   |   |   |   |   |      |   |       |
|            | 2) drafting                            |        |   |   |   |   |   |   |   |   |      |   |       |
|            | 3) Issue of draft report               |        |   |   |   |   |   |   |   |   |      |   |       |
|            | 4) incorporating comments              |        |   |   |   |   |   |   |   |   |      |   |       |
|            | 5) .....                               |        |   |   |   |   |   |   |   |   |      |   |       |
|            | 6) delivery of final report to Client} |        |   |   |   |   |   |   |   |   |      |   |       |
|            |  |        |   |   |   |   |   |   |   |   |      |   |       |
|            |  |        |   |   |   |   |   |   |   |   |      |   |       |
| <b>D-2</b> | {e.g., Deliverable #2:.....}           |        |   |   |   |   |   |   |   |   |      |   |       |
|            |  |        |   |   |   |   |   |   |   |   |      |   |       |
|            |  |        |   |   |   |   |   |   |   |   |      |   |       |
| <b>n</b>   |  |        |   |   |   |   |   |   |   |   |      |   |       |
|            |  |        |   |   |   |   |   |   |   |   |      |   |       |

- 1 List the deliverables with the breakdown for activities required to produce them and other benchmarks such as the Client's approvals. For phased assignments, indicate the activities, delivery of reports, and benchmarks separately for each phase so as to achieve the key dates as per Section 8.
- 2 Duration of activities shall be indicated in a form of a bar chart.
- 3 Include a legend, if necessary, to help read the chart.
- 4 A preliminary list of the installations proposed to be audited during the various phases of the Project shall be included.



## Form TECH-6: Team Composition, Task Assignments and Summary of CV Information

| Family Name,<br>First Name | Firm<br>Acronym | Area of<br>Expertise | Position<br>Assigned | Task<br>Assigned | Key Expert<br>or Non-Key<br>Expert | Nationality | Employment<br>Status with<br>Firm (full-<br>time, or other) | Education /<br>Degree (Year<br>/ Institution) | No. of years of<br>relevant project<br>experience | CV signature<br>(by expert/by<br>other) |
|----------------------------|-----------------|----------------------|----------------------|------------------|------------------------------------|-------------|---|---|---|---|
|                            |                 |                      |                      |                  |                                    |             |   |   |   |   |
|                            |                 |                      |                      |                  |                                    |             |   |   |   |   |
|                            |                 |                      |                      |                  |                                    |             |   |   |   |   |
|                            |                 |                      |                      |                  |                                    |             |   |   |   |   |
|                            |                 |                      |                      |                  |                                    |             |   |   |   |   |
|                            |                 |                      |                      |                  |                                    |             |   |   |   |   |
|                            |                 |                      |                      |                  |                                    |             |   |   |   |   |
|                            |                 |                      |                      |                  |                                    |             |   |   |   |   |
|                            |                 |                      |                      |                  |                                    |             |   |   |   |   |



## Form TECH-6 (contd.): Curriculum Vitae (CV) for Proposed Key Experts

### 1. General

|  |                           |
|--|---------------------------|
| <b>Position Title and No.</b>                    |                           |
| <b>Name of Key Expert</b>                        | <i>[Insert full name]</i> |
| <b>Name of the Firm proposing the Key Expert</b> |                           |
| <b>Date of Birth</b>                             | <i>[day/month/year]</i>   |
| <b>Nationality</b>                               |                           |
| <b>Country of Citizenship/Residence</b>          |                           |

### 2. Education: *[List college/university or other specialized education, giving names of educational institutions, dates attended, degree(s)/diploma(s) obtained]*

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### 3. Employment record relevant to the assignment:

| Period                   | Employing organization and title/position.<br>Contact information for references*  | Country | Summary of activities performed relevant to the Assignment |
|--------------------------|--|---------|--|
| [e.g., May 2005-present] | [e.g., Ministry of ....., advisor/consultant to...<br><br>For references: Tel...../e-mail.....; Mr. Hbbbbb, deputy minister] |         |  |
|                          |  |         |  |
|                          |  |         |  |

### 4. Membership in Professional Associations and Publications:

---

### 5. Language Skills (indicate only languages in which proposed expert can work):

---



---

### 6. Adequacy for the Assignment:

#### Detailed Tasks Assigned on tenderer's Team of Experts:

*[List major deliverables/tasks as in TECH- 5 in which the Expert will be involved]*

**Reference to Prior Work/Assignments that Best Illustrates Capability to Handle the Assigned Tasks**

**Certified that the above key expert meets the minimum qualifications as specified in TO R and is available for deployment for the work and complies with Para 5 of ITT.**

\_\_\_\_\_ Date: \_\_\_\_\_  
*[Signature of Key Expert or authorized representative of the firm]*

*Day/Month/Year*

Full name of authorized representative: \_\_\_\_\_

## Section 4. Financial Proposal - Standard Forms

### **Notes on Financial Proposal - Standard Forms**

Section 4. Financial Proposal – Standard Forms provides Financial Forms that the Client shall include in its Request for Proposals. Consultants shall fill out these Forms and include them in their proposals.

Financial Proposal Standard Forms shall be used for the preparation of the Financial Proposal according to the instructions provided under ITT 11.1. Forms FIN-1, FIN 1A, FIN-2, and FIN-3, are to be used whatever the selection method indicated in ITT is.

*Italicized notes provide guidance to the shortlisted Consultants for the preparation of their Financial Proposals; they should not appear on the Financial Proposals to be submitted.*

## Table of Financial Forms

|  |    |
|--|----|
| Form Fin 1: Letter of Price offer .....                  | 45 |
| Form FIN-1A: Break Up of the price.....                  | 46 |
| Form FIN 2 : Schedule of Payments and<br>milestones..... | 47 |
| Form FIN-3: Man Day Rates.....                           | 50 |

**Letter of Price Offer****FIN 1**

Date: \_\_\_\_\_

Invitation for Tender No.: *[insert No of LOI]*To: *[insert complete name of Employer]*

We, the undersigned, declare that:

- (a) We have examined and have no reservations to the Tender Document, including Addenda No.: \_\_\_\_\_ issued in accordance with Instructions to Tenderers (ITT) 8;
- (b) We offer to execute in conformity with the Tender Document and Technical Proposal submitted for the following Works:

- (c) The total fixed Lumpsum price of our Tender, **excluding local service tax and excluding any discounts** offered in item (d) below is:

Rupees \_\_\_\_\_ (In figures)

\_\_\_\_\_ (In words)

**And**

( in foreign currencies) \_\_\_\_\_ (in figures)

\_\_\_\_\_ (in words)

And the Local Service tax component is \_\_\_\_\_ (in figures)

\_\_\_\_\_ (in words)

- (d) The discounts offered on the total price and the methodology for their application are:

\_\_\_\_\_

- (e) Our Tender shall be valid for a period of 180 days from the date fixed for the Tender submission deadline in accordance with the Tender Document, and it shall remain binding upon us and may be accepted at any time before the expiration of that period;
- (f) If our Tender is accepted, we commit to submit a performance security in accordance with the Tender Document;
- (g) We understand that this Tender, together with your written acceptance thereof included in your notification of award, shall constitute a binding contract between us, until a formal contract is prepared and executed; and
- (h) We understand that you are not bound to accept the lowest evaluated Tender or any other Tender that you may receive.

**Authorised Signatory:**

Signature: \_\_\_\_\_

Name: \_\_\_\_\_

Position: \_\_\_\_\_

Date: \_\_\_\_\_

Company: \_\_\_\_\_

## **FIN 1A**

**The break-up of the price shown in FIN 1 is as below:**

**(a) FOR SIGNALLING SYSTEM**

| ISA Assessment of Signalling System                 | Local currency (INR) | FC ( foreign currency) |
|---|----------------------|------------------------|
| a. Cost excluding local service tax ( as per FIN 3) |                      |                        |
| b. Local Service Tax                                |                      |                        |

**(b) For Electronic Interlocking.**

| ISA Assessment GP1                                  | Local Currency (INR) | FC ( foreign currency) |
|---|----------------------|------------------------|
| a. Cost excluding local service tax ( as per FIN 3) |                      |                        |
| b. Local Service Tax.                               |                      |                        |

**(c) For Multi section Digital Axle counter**

| ISA Assessment GP2                                  | Local Currency (INR) | FC ( foreign currency) |
|---|----------------------|------------------------|
| a. Cost excluding local service tax ( as per FIN 3) |                      |                        |
| b. Local Service Tax.                               |                      |                        |

**(d) For TPWS**

| ISA Assessment GP3                                  | Local Currency (INR) | FC ( foreign currency) |
|---|----------------------|------------------------|
| a. Cost excluding local service tax ( as per FIN 3) |                      |                        |
| b. Local Service tax.                               |                      |                        |



## **FIN 2**

### **SCHEDULE OF PAYMENTS AND MILESTONES**

Client shall make payments to the ISA based on the stage payments as shown below.  
The stage payments shall be made on completion of the corresponding activities after necessary deductions.

The percentages shown will be made for each activity based on the amount quoted.

Note: The schedule of key dates for STP-5 & STP-5A Contract are provided in Section 8.  
The tenderer should comply with the key dates for above contracts including its updation (if any).

#### **(a) For Signalling system**

|  | <b>Activity Completed</b>  | <b>Reference Clause as per TOR</b> | <b>Stage payment of Lump sum</b> | <b>Progress schedule(weeks from date of letter of acceptance)</b>       |
|--|--|------------------------------------|----------------------------------|---|
| Obtain the “Notice of No Objection” or “Notice of No Objection subject to ---“ from the Client’s representative for: |  |                                    |                                  |   |
| 1.   | Safety Assessment plan & Report 1  | 11.1 & 11.2                        | 7.5%                             | 45 days   |
| 2.   | Report 2   | 11.3                               | 7.5%                             | Follow STP-5 & 5A Schedule  |
| 3.   | Report 3   | 11.4                               | 7.5%                             | Follow STP-5 & 5A Schedule  |
| 4.   | Report 4   | 11.4                               | 7.5%                             | Follow STP-5 & 5A Schedule  |
| 5.   | Report 5   | 11.5.1                             | 7.5%                             | Follow STP-5 & 5A Schedule  |
| 6.   | Report 6   | 11.5.2                             | 7.5%                             | Follow STP-5 & 5A Schedule  |
| 7.   | Report 7   | 11.6                               | 7.5%                             | Follow STP-5 & 5A Schedule  |
| 8.   | Report 8   | 11.7                               | 7.5%                             | Follow STP-5 & 5A Schedule  |
| 9.   | Final Safety Assessment Report for Signalling system for use in DFCCIL.  | 14.2                               | 20%                              | Follow STP-5 & 5A Schedule  |
| 10.  | Quarterly/Monthly progress report<br>(Note: Proportionate amount i.e 1.00% to be paid quarterly for each quarterly/monthly audit report. Beyond 16 <sup>th</sup> quarter no payment will be made in the extended period if any). Remaining 4% shall be | 12.6, 13                           | 20%                              | Each quarter from the date of issue of LOA upto completion of contract. |

|  |                                 |  |  |  |
|--|---------------------------------|--|--|--|
|  | made on completion of contract. |  |  |  |
|--|---------------------------------|--|--|--|

**(b) For Electronic Interlocking**

|  | <b>Activity Completed</b>   | <b>Reference Clause as per TOR</b> | <b>Stage payment of Lump sum</b> | <b>Progress schedule(weeks from date of letter of acceptance)</b> |
|--|---|------------------------------------|----------------------------------|---|
| Obtain the “Notice of No Objection” or “Notice of No Objection subject to ---“ from the Client’s representative for: |   |                                    |                                  |   |
| 1.   | Safety Assessment Report for<br>(i) Type test & trial<br>(ii) Field trial<br>(iii) Cross Acceptance/ Approval for Use on DFCCIL | 12.3                               | 25%<br>25%<br>25%                | Follow STP-5 Schedule   |
| 2.   | Final Safety Assessment Report for Electronic Interlocking for use in DFCCIL.   | 14.1                               | 25%                              | Follow STP-5 Schedule   |

**(c) For MSDAC**

|  | <b>Activity Completed</b>   | <b>Reference Clause as per TOR</b> | <b>Stage payment of Lump sum</b> | <b>Progress schedule(weeks from date of letter of acceptance)</b> |
|--|---|------------------------------------|----------------------------------|---|
| Obtain the “Notice of No Objection” or “Notice of No Objection subject to ---“ from the Client’s representative for: |   |                                    |                                  |   |
| 1.   | Safety Assessment Report for<br>(i) Field trial<br>(ii) Cross Acceptance/ Approval for Use on DFCCIL. | 12.3                               | 30%<br>30%                       | Follow STP-5 Schedule   |
| 2.   | Final Safety Assessment Report for MSDAC for use in DFCCIL.   | 14.1                               | 40%                              | Follow STP-5 Schedule   |

**Note: MSDAC equipment falls under Para 8 note 2 of the Procedure order for Cross acceptance/approval ( Appendix –I to TOR) which requires Field trials only.**

**(d) For TPWS**

|  | <b>Activity Completed</b>   | <b>Reference Clause as per TOR</b> | <b>Stage payment of Lump sum</b> | <b>Progress schedule(weeks from date of letter of acceptance)</b> |
|--|---|------------------------------------|----------------------------------|---|
| Obtain the “Notice of No Objection” or “Notice of No Objection subject to ---“ from the Client’s representative for: |   |                                    |                                  |   |
| 1.   | Safety Assessment Report for<br>(i) Type test & trial<br>(ii) Field trial<br>(iii) Cross Acceptance/<br>Approval for Use on DFCCIL. | 12.3                               | 25%<br>25%<br>25%                | Follow STP-5A<br>Schedule   |
| 2.   | Final Safety Assessment<br>Report for TPWS for use in<br>DFCCIL.  | 14.1                               | 25%                              | Follow STP-5A<br>Schedule   |

### **FIN 3**

The tenderer must fill and submit the minimum number of man days and man day rates in the format of FIN 3.

The total of FIN 3 should match with Tender Total (FIN 1, 1A).

### **Man Day Rates**

#### **(a) For Signalling System**

| Mandays rate for expat staff category | Man day rate (a) |
|---------------------------------------|------------------|
|                                       | FC               |
| PM/Assessor                           |                  |
| Dy. Assessor                          |                  |
| System Expert                         |                  |
| Secretary                             |                  |

| Mandays rate for Indian staff category | Man Day Rate (b) |
|--|------------------|
|  | LC(INR)          |
| PM/Assessor                            |                  |
| Dy. Assessor                           |                  |
| System Expert                          |                  |
| Secretary                              |                  |

| S No | Activity   | Category      | Minimum number of Man Days |            | Total Price | Total Price |
|------|--|---------------|----------------------------|------------|-------------|-------------|
|      |  |               | Signalling System          |            | FC          | LC(INR)     |
|      |  |               | Expat (c)                  | Indian (d) | (a) *(c)    | (b) *(d)    |
| 1    | Safety Assessment plan (Para 11.1 of TOR)          | PM/Assessor   |                            |            |             |             |
|      |  | Dy. Assessor  |                            |            |             |             |
|      |  | System Expert |                            |            |             |             |
|      |  | Secretary     |                            |            |             |             |
| 2    | Assessment of Contractor's plan (Para 11.2 of TOR) | PM/Assessor   |                            |            |             |             |
|      |  | Dy. Assessor  |                            |            |             |             |
|      |  | System Expert |                            |            |             |             |
|      |  | Secretary     |                            |            |             |             |
| 3    | Design assessment (Para 11.3 of TOR)               | PM/Assessor   |                            |            |             |             |
|      |  | Dy. Assessor  |                            |            |             |             |
|      |  | System Expert |                            |            |             |             |
|      |  | Secretary     |                            |            |             |             |
| 4    |  | PM/Assessor   |                            |            |             |             |

|    |  |               |  |  |  |  |
|----|--|---------------|--|--|--|--|
|    | Assessment of Manufacturing and Installation plans (Para 11.4 of TOR)              | Dy. Assessor  |  |  |  |  |
|    |  | System Expert |  |  |  |  |
|    |  | Secretary     |  |  |  |  |
| 5  | Engineering Safety validation activities (Para 11.5.1 of TOR)                      | PM/Assessor   |  |  |  |  |
|    |  | Dy. Assessor  |  |  |  |  |
|    |  | System Expert |  |  |  |  |
|    |  | Secretary     |  |  |  |  |
| 6  | Engineering Safety Validation Case Safety assessment (Para 11.5.2 of TOR)          | PM/Assessor   |  |  |  |  |
|    |  | Dy. Assessor  |  |  |  |  |
|    |  | System Expert |  |  |  |  |
|    |  | Secretary     |  |  |  |  |
| 7  | O&M process Assessment (Para 11.6 of TOR)  | PM/Assessor   |  |  |  |  |
|    |  | Dy. Assessor  |  |  |  |  |
|    |  | System Expert |  |  |  |  |
|    |  | Secretary     |  |  |  |  |
| 8  | Trial running Tests Assessment (Para 11.7 of TOR)                                  | PM/Assessor   |  |  |  |  |
|    |  | Dy. Assessor  |  |  |  |  |
|    |  | System Expert |  |  |  |  |
|    |  | Secretary     |  |  |  |  |
| 9  | Final Safety Assessment for Signalling System for use in DFCCIL (Para 14.2 of TOR) | PM/Assessor   |  |  |  |  |
|    |  | Dy. Assessor  |  |  |  |  |
|    |  | System Expert |  |  |  |  |
|    |  | Secretary     |  |  |  |  |
| 10 | Quarterly/Monthly progress report (Para 12.6, 13 of TOR)                           | PM/Assessor   |  |  |  |  |
|    |  | Dy. Assessor  |  |  |  |  |
|    |  | System Expert |  |  |  |  |
|    |  | Secretary     |  |  |  |  |

**(b) For Electronic Interlocking**

| Mandays rate for expat staff category | Man day rate (e) |
|---------------------------------------|------------------|
|                                       | FC               |
| PM/Assessor                           |                  |
| Dy. Assessor                          |                  |
| System Expert                         |                  |
| Secretary                             |                  |

| Mandays rate for Indian staff category | Man Day Rate (f) |
|--|------------------|
|  | LC(INR)          |
| PM/Assessor                            |                  |
| Dy. Assessor                           |                  |
| System Expert                          |                  |
| Secretary                              |                  |

| sn<br>o | Activity   | Category      | Minimum number of Man Days |            | Total Price FC | Total Price LC(INR) |
|---------|--|---------------|----------------------------|------------|----------------|---------------------|
|         |  |               | Expat (g)                  | Indian (h) | (e*g)          | (f*h)               |
| 1       | Safety Assessment Report for<br>(i) Type test & trial<br>(ii) Field trial<br>(iii) Cross Acceptance/ Approval for Use on DFCCIL.<br>(Para 12.3 of TOR) | PM/Assessor   |                            |            |                |                     |
|         |  | Dy. Assessor  |                            |            |                |                     |
|         |  | System Expert |                            |            |                |                     |
|         |  | Secretary     |                            |            |                |                     |
| 2       | Final Safety Assessment Report for Electronic Interlocking for use in DFCCIL.<br>(Para 14.1 of TOR)  | PM/Assessor   |                            |            |                |                     |
|         |  | Dy. Assessor  |                            |            |                |                     |
|         |  | System Expert |                            |            |                |                     |
|         |  | Secretary     |                            |            |                |                     |

## (c) For MSDAC

| Mandays rate for expat staff category | Man day rate (i) |
|---------------------------------------|------------------|
|                                       | FC               |
| PM/Assessor                           |                  |
| Dy. Assessor                          |                  |
| System Expert                         |                  |
| Secretary                             |                  |

| Mandays rate for Indian staff category | Man Day Rate (j) |
|--|------------------|
|  | LC(INR)          |
| PM/Assessor                            |                  |
| Dy. Assessor                           |                  |
| System Expert                          |                  |
| Secretary                              |                  |

| sn<br>o | Activity  | Category      | Minimum number of Man Days |            | Total Price FC | Total Price LC(INR) |
|---------|---|---------------|----------------------------|------------|----------------|---------------------|
|         |   |               | Expat (k)                  | Indian (l) | (i*k)          | (j*l)               |
| 1       | Safety Assessment Report for<br>(i) Field trial<br>(ii) Cross Acceptance/ Approval for Use on DFCCIL.<br>(Para 12.3 of TOR) | PM/Assessor   |                            |            |                |                     |
|         |   | Dy. Assessor  |                            |            |                |                     |
|         |   | System Expert |                            |            |                |                     |
|         |   | Secretary     |                            |            |                |                     |
| 2       | Final Safety Assessment Report for Electronic Interlocking for use in DFCCIL.<br>(Para 14.1 of TOR)                         | PM/Assessor   |                            |            |                |                     |
|         |   | Dy. Assessor  |                            |            |                |                     |
|         |   | System Expert |                            |            |                |                     |
|         |   | Secretary     |                            |            |                |                     |

**(d) For TPWS**

| Mandays rate for expat staff category | Man day rate (m) |
|---------------------------------------|------------------|
|                                       | FC               |
| PM/Assessor                           |                  |
| Dy. Assessor                          |                  |
| System Expert                         |                  |
| Secretary                             |                  |

| Mandays rate for Indian staff category | Man Day Rate (n) |
|--|------------------|
|  | LC(INR)          |
| PM/Assessor                            |                  |
| Dy. Assessor                           |                  |
| System Expert                          |                  |
| Secretary                              |                  |

| sno | Activity  | Category      | Minimum number of Man Days |            | Total Price FC | Total Price LC(INR) |
|-----|---|---------------|----------------------------|------------|----------------|---------------------|
|     |   |               | Expat (o)                  | Indian (p) | (m*o)          | (n*p)               |
| 1   | Safety Assessment Report for<br>(i) Type test & trial<br>(ii) Field trial<br>(iii) Cross Acceptance/ Approval for Use on DFCCIL<br>(Para 12.3 of TOR) | PM/Assessor   |                            |            |                |                     |
|     |   | Dy. Assessor  |                            |            |                |                     |
|     |   | System Expert |                            |            |                |                     |
|     |   | Secretary     |                            |            |                |                     |
| 2   | Final Safety Assessment Report for Electronic Interlocking for use in DFCCIL<br>(Para 14.1 of TOR)  | PM/Assessor   |                            |            |                |                     |
|     |   | Dy. Assessor  |                            |            |                |                     |
|     |   | System Expert |                            |            |                |                     |
|     |   | Secretary     |                            |            |                |                     |

**Note:**

Note 1 and 2 deleted.

3. The man day rate shall be all inclusive cost including the remuneration for staff, transportation, lodging, equipment, printing of documents, surveys and others incidentals required for successful completion of the work excluding Local Service tax.
4. The breakup of the cost included for site audit visits for each expert shall also be submitted separately for effecting same in case of variations if required
5. Percentage of the local Service tax included in the costing of the work shall be given in FIN 1A.
6. While arriving at the “minimum Man day requirement”, Phased commissioning as mentioned in key dates enclosed in Section 8 to be kept in mind and details of the same shall be provided which shall also be used in case of variation.
7. The designations of Key and non key experts as mentioned above are indicative. The Tenderer may use the suitable designations against each of them.



## Section 5. Terms of Reference

### 1.0 Background

- 1.1 Ministry of Railways (MOR), Government of India has planned to construct Dedicated High Axle Load Freight Corridor covering about 3363 Kms on two corridors, Eastern Corridor from Ludhiana (Sahnewal) to Dankuni and Western Corridor from Jawaharlal Nehru Port, Mumbai to Tughlakabad/ Dadri near Delhi along with inter-linking of the two corridors at Dadri.
- 1.2 The DFC Project entails construction of mostly double line railway tracks except single line between Khurja – Sahnewal (near Ludhiana). Up-gradation of transportation technology, increase in productivity and reduction in unit transportation costs have been taken as guiding principles for formulating the DFC project. Various operating systems, motive power, Electric Traction, signalling and work processes are required to conform to this broad perspective.
- 1.3 Dedicated Freight Corridor Corporation of India Ltd. (DFCCIL), a public sector company has been set up under the Indian Companies Act 1956 for implementation of Dedicated Freight Corridor Project. Government of India is the sole shareholder of the DFCC.
- 1.4 Western DFC Route will be approximately 1470 Km long from Jawaharlal Nehru Port, Mumbai (JNPT) to Dadri via Surat – Vadodara – Ahmedabad – Ajmer – Phulera – Ringus – Narnaul – Rewari - Faridabad. Proposed alignment of DFC has been generally kept parallel to existing Indian Railway line except provision of detours at certain locations and Rewari - Dadri.
- 1.5 Western DFC is being financed by the JICA. This section is planned in a phased manner. The Phase-I of the Project covers a length of 915 km from Rewari-Makarpura (near Vadodara) all double line, 2x25 KV Electrified section with Automatic Block Signalling, TPWS including 120 On Board Equipment. The second phase (Phase-II) covers a length of 428 route km between Makarpura (near Vadodara) - JNPT section double-line, 2x25 KV Electrified section with Automatic Block Signalling, TPWS including 80 On Board Equipment and also consists of about 128 Km double line, Rewari - Dadri, 2x25 KV electrified, Signalling with Absolute block working. Eastern and Western Corridors of DFC are connected to each other through a 47 Km double line link between Khurja and Dadri. This will also be, 2x25 KV Electrified section with Automatic Block Signalling.
- 1.6 The work area for present assignment is Rewari-Makarpura section of WDFC Phase I.

### 2.0 Project details, in brief

- 2.1 Rewari - Makarpura section of WDFC Phase 1 is located along Rewari – Phulera - Palanpur section of North-Western-Railway on the east side of existing IR network and Palanpur- Makarpura section of Western Railway on the east side of existing Indian Railway network from Palanpur to Jagudan and on west side from Jagudan to

Makarpura. The proposed alignment of DFC is passing generally parallel to the existing IR network. The alignment of DFC is taking detour to avoid city congestion at Phulera. The alignment between Pansar and Vadodara (Makarpura) (154 km approximately) takes detours from the existing Western Railway tracks.

2.2 The procurement of works in Rewari - Makarpura section (WDFC phase 1) is on Design Build Lump Sum price basis. There are eight works contracts for this section, namely

- (1) Civil/building/Track contracts Rewari-Ikbalgarh section having 2 packages (CTP-1, CTP-2).
- (2) Civil/building/Track contracts Ikbalgarh-Makarpura section (CTP-3R).
- (3) Special Steel bridges across river Mahi & Sabarmati (CTP-3A)
- (4) Electrical & Mechanical contracts Rewari-Makarpura section (EMP-4)
- (5) Signal & telecommunication (except TPWS) contracts Rewari – Makarpura section (STP-5)
- (6) Train Protection & Warning System contracts Rewari –Makarpura- JNPT section (STP-5A)
- (7) Plant and Equipment contracts for Operation and Maintenance (PEP-6)
- (8) Rolling Stock cum Maintenance and Depot Works (RSP-7)

The contracts CTP-1, CTP-2, CTP-3R, CTP-3A, EMP-4 STP-5 and STP-5A have already been awarded and the work is in progress. The contracts PEP-6 & RSP-7 are in process.

2.3 The details of Civil/Building/track Contract Packages are as under. The Scope of S&T Contract (STP5) shall cover S&T Works at all the locations mentioned below:-

| <b>Package</b> | <b>From</b> | <b>To</b> | <b>Approximate Total Length (Route Km)</b> | <b>Approximate Total Length (Route Km)</b>                |
|----------------|-------------|-----------|--|---|
| CTP-1 & 2      | Rewari      | Iqbalgarh | 626 (DL)                                   | Parallel Length (DL) – 609.5<br>Detour Length (DL) – 16.5 |
| CTP-3R         | Iqbalgarh   | Makarpura | 289 (DL)                                   | Parallel Length (DL) – 20.5<br>Detour Length (DL) – 168.5 |

2.4 The list of Junction & Crossing stations along with their chainages in the section Rewari-Makarpura as well as length of single/double line track connecting DFCCIL Junction stations and IR stations is detailed as under:

## (1) JUNCTION STATIONS

Junction stations are the interchange stations with Indian Railways. The list of Junction stations and their chainages (indicative) on Rewari-Makarpura section are as detailed below:

| S. No | Name of Station | DFCCIL Km/ Chainage               |
|-------|-----------------|-----------------------------------|
| 1     | Rewari          | Km.11/389- Km. 14/420             |
| 2     | Ateli           | Chainage - Km. 26/073 - Km.28/791 |
| 3     | Phulera         | Km.25/650- Km.28/552              |
| 4     | Bangur Gram     | Km.10/069-Km. 14/469              |
| 5     | Marwar          | Km. 18/636 – Km. 21/404           |
| 6     | Palanpur        | Km. 10/640 – Km. 13/663           |
| 7     | Mehasana        | Km. 56/320 – Km. 58/937           |
| 8     | Sabarmati North | Km. 97/056 – Km. 100/217          |
| 9     | Sabarmati South | Km. 79/394 – Km. 81/927           |
| 10    | Makarpura       | Km. 131/530 – Km. 134/472         |

## (2) CROSSING STATIONS

The list of Crossing stations and their chainages (indicative) on Rewari-Makarpura section are as detailed below:

| S. No. | Name of Station | DFCCIL Km/ Chainage     |
|--------|-----------------|-------------------------|
| 1      | Dabla           | Km.93/489- Km.95/589    |
| 2      | Baghega         | Km.58/450- Km. 61/060   |
| 3      | Shri Madhopur   | Km.21/790- Km. 23/892   |
| 4      | Pachar Malikpur | Km.74/036- Km. 76/136   |
| 5      | Sakun           | Km.6/411- Km. 8/802     |
| 6      | Kishangarh      | Km.75/269- Km. 77/369   |
| 7      | Saradhana       | Km. 47/205 – Km. 49/596 |
| 8      | Haripur         | Km. 74/530 – Km. 76/921 |
| 9      | Chandrawal      | Km. 55/519 – Km. 57/619 |
| 10     | Jawali          | Km. 85/294 – Km. 87/685 |
| 11     | Baroliya        | Km. 51/779 – Km. 53/893 |
| 12     | Keshav Ganj     | Km. 11/196 – Km. 14/496 |

|    |               |                           |
|----|---------------|---------------------------|
| 13 | Banas         | Km. 90/957 – Km. 93/355   |
| 14 | Swarup Ganj   | Km. 79/939 – Km. 82/330   |
| 15 | Shri Amirgarh | Km. 40/532 – Km. 42/663   |
| 16 | Chadotar      | Km. 0/149 – Km. 2/407     |
| 17 | Malosana      | Km. 99/558 – Km. 101/787  |
| 18 | Ghumasan      | Km. 16/451 – Km. 18/561   |
| 19 | Timba         | Km. 55/878 – Km. 58/160   |
| 20 | Changa        | Km. 198/594 – Km. 197/704 |
| 21 | Vasad         | Km. 131/530 – Km. 134/472 |

- (3) LENGTH OF SINGLE/DOUBLE LINE TRACK CONNECTING DFCCIL JUNCTION STATION AND IR STATION:

| S.NO | Location  | Approx. length of Single/double line between WDFC & IR station |
|------|---|--|
| 1    | Hissar line Connecting Track (Rewari Hisar line of IR to Rewari Jn station of DFC)                | 10.450 km (SL)   |
| 2    | Ateli connecting line (DFC Ateli Jn station to Kathuwas station of IR)                            | 3.077 km (SL)  |
| 3    | ICD connecting line (Ateli Jn station of DFC to Kathuwas station of IR)                           | 4.099 km (SL)  |
| 4    | Phulera JS UP Connecting Track ( Hirnoda Station of IR to DFC Phulera Junction station)           | 11.90435 Km (SL)   |
| 5    | Phulera JS DOWN Connecting Track ( DFC Phulera Junction station to Phulera Jn. of IR)             | 3.4835 Km (SL)   |
| 6    | Bangur Gram JS connecting Track ( Bangurgram Junction station of DFC to Bangurgram station of IR) | 0.142 Km (SL)  |

|    |  |                  |
|----|--|------------------|
| 7  | Marwar JS connecting Track ( Marwar Junction station of DFC to Marwar Junction station of IR)        | 0.634 Km (SL)    |
| 8  | Palanpur Connecting track ( DFC Chadotar station to DFC Palanpur Junction Sation)                    | 13.603 Km (DL)   |
| 9  | Mahesana connecting Track ( Mahesana IR station to Mahesana Junction station of DFC)                 | 6.685 Km (SL)    |
| 10 | Sabarmati North connecting Track ( Sanand station of IR to DFC Sabarmati North Junction station )    | 5.11346 Km (SL)  |
| 11 | Sabarmati North connecting Track ( Goraghuma station of IR to DFC Sabarmati North Junction station ) | 8.22495 Km (SL)  |
| 12 | Sabarmati South connecting Track (DFC Sabarmati South Junction station to Sanand station of IR )     | 2.100 Km (DL)    |
| 13 | Sabarmati South connecting Track (DFC Sabarmati South Junction station to Goraghuma station of IR )  | 5.390 Km (SL)    |
| 14 | Makarpura Junction Connecting Track ( DFC Makarpura Junction station to Makarpura station of IR)     | 8.250725 Km (DL) |

### 3.0 S&T and TPWS Works Contract (STP-5 & 5A)

3.1 (a) The S&T Contract is for “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 AND 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 FREIGHT CORRIDOR”. The Contract for this work has been awarded to M/S. S.A.F.E Consortium.

- 3.1 (b) The TPWS contract is for “DESIGN AND CONSTRUCTION OF TRAIN PROTECTION & WARNING SYSTEM (TPWS) FOR REWARI – JNPT SECTION (Combined for Phase 1 and Phase 2) INCLUDING TESTING AND COMMISSIONING ON DESIGN-BUILD LUMP SUM PRICE BASIS OF WESTERN DEDICATED FREIGHT CORRIDOR”. The Contract for this work has been awarded to M/S. IN-Signal Consortium.

### **3.2 Signalling & TPWS System Overview**

- 3.2.1 The entire stretch from Rewari to Makarpura will be provided with Automatic Signalling system. Automatic Signalling shall be provided in the block sections and main lines of the stations. Trains will run observing automatic/ semi-automatic signals en route, which in normal conditions will be set for a through and uninterrupted run.
- 3.2.2 The Single line tracks connecting DFCCIL Junction stations and IR stations shall be provided with Absolute Block Signalling with Block/Slot working.
- 3.2.3 The LC gates in the section shall be protected with semi-automatic Gate signals. The gateman shall be provided with audio visual ‘Approach Warning’ when the train hits the approach warning track section. Once the gateman has closed the gate and the train has reached the approach locking track section, the LC gate barriers will get ‘Approach locked’. The route will then get automatically set and gate signals get cleared if the relevant track sections ahead are clear. The route will get automatically released after passage of train beyond LC gate.
- 3.2.4 The Signals, Points, LC gates, Track-vacancy detection systems and other signalling equipment at the stations and in the block sections will be controlled/monitored by Electronic Interlocking (EI) located at stations and along the route. The Electronic Interlocking architecture including their size, numbers and locations shall be determined by the Contractor’s Design.
- 3.2.5 Digital Axle counter technology shall be used to provide primary train detection function at the Stations and the Block sections. The Track vacancy detection system architecture including size, numbers and locations shall be determined by the Contractor’s Design.
- 3.2.6 The Power supply for the Signalling system at the Stations and in the Block section shall be provided using Power Supply System system. The Power supply scheme including rating, quantity and locations of Power supply systems, shall be determined by the Contractor’s Design.

- 3.2.7 A centralized Operational Control Centre (OCC) for entire Western Dedicated Freight Corridor (Dadri-Rewari-Makarpura-JNPT) sections shall be located at Ahmedabad along with the Regional Office of Western Dedicated Freight Corridor.
- 3.2.8 The OCC will house all the controllers such as Traffic Controllers, Track Controller, Traction Power Controllers, Signal Fault Controller etc. who will monitor and manage all train operations and associated activities, including maintenance of entire WDFC from the OCC. The OCC shall house the Train Management system (TMS) and the 'Traction Power SCADA Control system'.
- 3.2.9 The Train Management System (TMS) provided in OCC shall collect real time data of important Signalling functions of stations and of block sections and display it in the OCC. The Traffic Controller(s) at the OCC shall be provided with an overview of the railway on a Video Wall, sufficient to supervise and monitor train movements across the whole Corridor and will control train operations by voice command.
- 3.2.10 While the Traffic controllers at OCC will manage overall train operations, the Railway control at local level will be managed by Station Masters located at the stations along the route. Station Masters will require an appropriate display and sufficient control to support their activity under both normal and abnormal railway operations. The Station Masters will receive train service and management information from the Traffic Controller located at the OCC.
- 3.2.11 TPWS system will consist of Balise, LEU & On-Board Equipment.
- 3.2.12 It is anticipated that Centralized Traffic Control (CTC) may be required in the future, therefore system provided under this contract shall be demonstrable to be "future proofed" for the same.

### 3.3 Signalling & TPWS Scope of Works

3.3.1 The Signalling system scope comprises the following:

- (1) Design and implementation of the Signalling works at the following twenty one (21) Crossing stations: Dabla, Baghegha, Shri Madhopur, Pachar Malikpur, Sakhun, Kishangarh, Sadhana, Haripur, Chandawal, Jawali, Biroliya, Keshavganj, Banas, Swarupganj, Shri Amirgarh, Chadotar, Malosan, Ghumasan, Timba, Changa and Vasad and ten (10) Junction stations at Rewari, ateli, Phulera, Bangurgram, Marwar, Palanpur, Mahesana, Sabarmati north, Sabarmati South and Makarpura.
- (2) Design and Implementation of Block/Slot working at ten IR junction stations.
- (3) Design and Implementation of Automatic Signalling in a continuous stretch on DFCCIL Main lines from Rewari to Makarpura.
- (4) Design and Implementation of Absolute block working/slot working on single/double line connecting IR & DFCCIL.
- (5) Design and Implementation of Interlocking of LC gates. This shall include design and implementation of gateman's emergency control system and appropriate display system.
- (6) Design and Implementation of a Train Management System (TMS) for supervision, management and monitoring of train traffic on the Rewari-Makarpura section.



- (7) Design and implementation of the Station Master's control and display systems required at each station.
- (8) Design & implementation of TPWS system on Rewari-JNPT section including 200 Loco On-Board Equipment.

3.3.2 "Design and Implementation" means all activities associated with Designing a Signalling system, Manufacture & Supply, Installation, Testing and Commissioning, Training, Supply of Spares and documentation, Handover of the system to the Employer and support during Defect Notification period and beyond as per provisions of Employer's requirements.

### 3.4 Applicable Standards for Implementation of Signalling & TPWS system

For the signalling & TPWS system, standards as given below, but not limited to, shall be followed.

| SPECIFICATION NO.         | DESCRIPTION   |
|---------------------------|---|
| <b>IRS SPECIFICATIONS</b> |   |
| S 6                       | Tubular Steel Signal Poles  |
| S 21                      | Electric Key Transmitter  |
| S 23                      | Electrical and Electronic based signalling and interlocking equipment.                |
| S 24                      | electric point machine Non-trailable types  |
| S 26                      | Colour light signal - Multi unit type   |
| S 34                      | Testing Railway Signalling Relays (General)   |
| S 36                      | Route Relay Interlocking systems  |
| S 41                      | Electric lifting Barrier  |
| S 43                      | Automatic signalling for unidirectional traffic                                       |
| S 63                      | PVC insulated underground unscreened Signalling Cables for Railway Signalling         |
| S 66                      | Route indicator, direction type 5 lamp unit arm (1 to 6 way)                          |
| S 76                      | PVC insulated indoor Cables for Railway Signalling                                    |
| S 93(A)                   | Secondary cell – Maintenance Free   |
| S 99                      | Data Logger   |
| S105                      | Block Proving by Axle Counter using UFSBI   |
| TC-30                     | Underground Railway Jelly Filled Quad Cables for Signalling and Telecom Installations |



| <b>SPECIFICATION NO.</b>          | <b>DESCRIPTION</b>  |
|-----------------------------------|---|
| <b>RDSO SPECIFICATIONS</b>        |   |
| RDSO/SPN/144                      | Safety & Reliability requirement of Electronic Signalling Equipment   |
| RDSO/SPN/153                      | LED Signal lighting unit  |
| RDSO/SPN/176                      | Multi Section Digital Axle Counter  |
| RDSO/SPN/177                      | Single Section Digital Axle Counter   |
| RDSO/SPN/183                      | Train Protection & Warning System   |
| RDSO/SPN/189                      | Terminal Blocks, Fuse terminal blocks and Miniature fuse links of international standard  |
| RDSO/SPN/192                      | Electronic interlocking   |
| RDSO/SPN/197                      | Code of Practice for Earthing and Bonding system for Signalling equipment   |
| RDSO/SPN/203                      | Electronic Interlocking for Big Yards   |
| RDSO/SPN/256                      | Earth Leakage Detector  |
| STS/E/Relays/AC Lit LED Signal/09 | Universal Plug-in type, tractive armature AC Lamp proving relay (metal to carbon) for 110V AC LED Signal Lamp                         |
| <b>EUROPEAN STANDARDS</b>         |   |
| IEC 62278                         | Railway Applications- Specifications and demonstration of Reliability, Availability, Maintainability & Safety.                        |
| IEC 62279                         | Railway Applications-Communications, Signalling and processing systems-software for Railway Control and Protection Systems.           |
| IEC 62425                         | Railway Applications-Communications, Signalling and processing systems- Safety Related Electronics Systems for Signalling.            |
| IEC 62427                         | Railway Applications- Compatibility between Rolling Stock and Train Detection Systems   |
| IEC 62280-1                       | Railway Applications-Communications, Signalling and processing systems – Safety related communication in closed transmission systems. |
| IEC 62280-2                       | Railway Applications-Communications, Signalling and processing systems - Safety related communication in                              |

| <b>SPECIFICATION NO.</b> | <b>DESCRIPTION</b>  |
|--------------------------|---|
|                          | open transmission systems.  |
| IEC 62236                | Railway Applications – Electromagnetic compatibility (EMC)  |
| IEC 60571                | Electronic Equipment Used on Rail Vehicles  |
| IEC 61373                | Railway Applications – Rolling stock equipment – Shock and vibration tests                        |
| IEC 62305                | Protection against Lightning  |
| IEC 61992                | Railway applications – Surge arresters and low-voltage limiters for specific use in. D.C. systems |
| IEC 60364                | Electrical Installations for Buildings  |
| IEC 62505                | Railway applications – Fixed installations – Particular requirements for A.C. switchgear          |
| EEIG: 97s066             | ERTMS/ETCS Environmental requirements   |

### 3.5 Manuals and Schedules to be referenced during the design of Signalling system:

- (1) Indian Railways Signal Engineering Manual (IRSEM).
- (2) General Rules (GR) of DFCCIL/IR.
- (3) AC Traction Manual (ACTM) of IR.
- (4) Indian Railways Permanent Way Manual (IRPWM).
- (5) Schedule of Dimensions (SOD) of DFCCIL.

### 3.6 Procurement of Signalling & TPWS items/equipment

3.6.1 The Contractor can source items/equipment either locally (from India) or from the International market.

3.6.2 Equipment procured locally shall be from RDSO's "Approved list of firms for manufacture and supply" and as per relevant specifications.

3.6.3 If any equipment proposed to be imported has RDSO specifications (IRS or SPN) and is not yet having Cross Acceptance approval (by RDSO/ DFCCIL), the concerned firm shall be got approved for the said equipment as per "Cross Acceptance" procedure of RDSO/ DFCCIL before commencement of Integrated Testing on Rewari – Iqbalgarh section.

3.6.4 If any equipment other than covered in para 3.6.2 and 3.6.3 above is proposed to be supplied, then the same must be proven being in regular use for at least last 2 years (except PSS for which provenness of at least 5 years shall apply). Details of the same shall be submitted well in advance for review without objection by the Engineer.

### 3.7 Information regarding the Signalling Generic products is available at Appendix F

**(Section 7).****4.0 Objective of the assignment**

The Objective of engaging the ISA services is to have an Independent third party assessment on the Safety of the Signalling System including all sub-systems, including Safety assessment of non RDSO approved Generic Products - Electronic Interlocking and Digital Axle counter *and TPWS*, imported for Signalling works, to be implemented under S&T Works Contract.

**5.0 Scope of ISA services**

5.1 The scope of ISA services shall broadly include the following:

- (1) Independent assessment of Safety of Signalling System including TPWS, being provided in Rewari- Makarpura section vide S&T works contracts STP5 and STP5A.
- (2) Independent Safety assessment of following Signalling products as per DFCCIL's Cross Acceptance/Approval Policy.
  - (a) Electronic Interlocking
  - (b) Digital Axle Counter
  - (c) *Train Protection & Warning System*

5.2 The scope of ISA services shall be limited to Signalling system and Signalling products provided under S&T Works Contract.

5.3 The assessment shall include Safety assessment of Track Vacancy Detection System using MSDACs for Main and Supervisory detection.

5.4 The assessment shall include Safety assessment of Point machine Ground connections including Clamp Lock for its use with turnouts.

5.5 The scope of services shall be limited only to the Signalling Safety aspects. SHE (Safety, Health & Environment) activities during construction phase and Security aspects will not be part of the ISA Services.

5.6 The ISA services shall be limited to the Safety aspects of design, manufacturing installation, T&C and inputs to O&M. The ISA shall assess both hardware and Application Software (Data) components of the Signalling system.

5.7 The ISA Safety activities shall include the mitigation of risks associated with hazards resulting from sharing of interface systems with Rolling Stock, Track, Traction, Power Supply, and Civil Works etc.

5.8 The ISA shall assess the Signalling System and conclude that the adequate level of safety is achieved by the Signalling system, including interfaces with other systems to ensure safe operation of the trains. The ISA shall do the Safety assessment of the Generic Products – Electronic Interlocking, Digital axle Counter and *TPWS*, and recommend to the Employer for its Project specific Cross approval/acceptance.

**6.0 Safety Assessment of Signalling system**

6.1 The ISA shall carry out Independent Safety Assessments and Independent Safety Audits covering all Safety critical (SIL 3 and 4) and Safety related (SIL 1 & 2) systems, as required and functions for the Signalling System.

6.2 The ISA Safety activities shall closely follow every stage of the Project development process i.e. detailed Hardware and Software design, V&V, Installation and Testing stages, Trial runs etc.

- 6.3 The Independent Safety assessment shall be carried out in accordance with the principles and processes described in the CENELEC railway application standards EN 50126 (or IEC 62278), EN 50128 (or IEC 62279) and EN 50129 (or IEC 62425) as well as the relevant CENELEC guides for the implementation of these standards.
- 6.4 The Independent Safety Assessment shall broadly cover the following, but not limited to:
- (1) Review and assess the adequacy and robustness of the Signalling safety management organization of the Contractor and safety management processes undertaken by the Contractor during requirements specification, design, manufacturing/installation, testing and commissioning and system handover phases.
  - (2) Review and assess the adequacy of the safety requirements for the design, manufacturing, installation, testing and commissioning of the Signalling system and determine that these requirements have been met;
  - (3) Verify that the planned Signalling activities are being or have been carried out and in the manner and to the standards prescribed in the Contractor's Safety Plan, System Assurance Plan and RAM Plan;
  - (4) Verify that adequate competent staff are deployed by the Contractor for the Signalling works;
  - (5) Assess the adequacy and robustness of hazard identification, ranking, resolution, recording, monitoring and close out processes and to verify that risk has been reduced to As Low As Reasonably Practicable (ALARP) and in accordance with the Safety Requirements for each system;
  - (6) Evaluate the effectiveness of the Signalling safety management activities undertaken by the Contractor during design, verification & validation, installation, testing, commissioning and test running phases of the Project for each safety critical and safety related system ;
  - (7) Evaluate the adequacy and effectiveness of the processes and methodologies for managing and ensuring compliance with relevant safety codes, standards, regulations and specifications;
  - (8) Evaluate the adequacy of test plans, test scenarios, test passing criteria, processes, follow up of test reports and competency management of test engineers, the migration plan, the contingency plan and similar documentation;
  - (9) Review the Contractor's processes for determining the readiness of the Signalling System for test running and revenue service;
  - (10) Evaluate the process of handling design changes (both software and hardware) and configuration management;
  - (11) Evaluate the processes for managing key safety interfaces, including Electro-Magnetic Compatibility (EMC), EMI management;
  - (12) Assess on the compliance of Signalling and Communication systems with EN 50126 (or IEC 62278); EN 50128 (or IEC 62279) and EN 50129 (or IEC 62425);
  - (13) Conclude on the achievement of SIL classifications for all Safety related and Safety critical sub-system; and the capability of the Signalling System to operate and maintain to an adequate level of safety.
- 6.5 The ISA may adapt the level of detail of the Safety Assessment according to the following factors:
- (1) Sub-system Safety Integrity Level (SIL); and
  - (2) Existing Safety demonstrations for the related system/sub-systems.
- 6.6 Methodology
- (1) The Safety Assessment shall be broadly based upon two types of activities:
    - (a) Review of the Contractors' documentation pertaining to quality/safety aspects throughout the various stages of development of the Signalling System and;
    - (b) Inspections and Safety Audits within the Contractors entities and on site.

- (2) Safety assessment will combine the use of design analysis, results from safety audits and practical assessment. Each assessment will include a review of the processes and organization employed at respective stage. It is expected that the results of safety audits conducted independent of the safety assessments shall be used as the basis of assessment for each respective phase.
- (3) The assessment will pay particular attention to the project Hazard Log as this contains the traceability from the safety requirements to documentation supporting Engineering activities for the project.

## **6.7 Document Review**

- 6.7.1 The ISA shall independently review all relevant documents for compliance with the selected standards, consistency with the respective specifications as well as for adequacy of the determined Safety Integrity Level according to EN 50126 (or IEC 62278), EN 50128 (or IEC 62279), and EN 50129 (or IEC 62425) standards.
- 6.7.2 The ISA may carry out technical assessment of the documents, including all relevant design documents and plans, design calculations, installation documents, test plans and test procedures, software/hardware documentation, meeting minutes, the Contractor's Internal Audit reports and Internal Safety Assessment reports, RAMS analysis documentation, Reliability growth report, testing and commissioning records, change records for both hardware and software, Safety cases & Trial run.
- 6.7.3 The ISA shall pay special attention to the applicability and appropriateness of the available pre-certificates and reports, fulfilment of safety-related application conditions, impact and requirements on the operational concept, including the safety-related systems interfacing with the Signalling System.
- 6.7.4 The ISA shall collect, inspect and analyse all necessary data required to assess whether the Contractor has throughout the project duration, applied appropriate processes and Safety solutions in accordance with the requirements of the applicable Safety standards in the Contract between the Employer and the Contractor, as well as the applicable local and national laws/acts. Where some of the documents are not being made available, the relevance of the same and the need for the same shall be justified by ISA for the Engineer/Employer to intervene and provide the same from the contractor.
- 6.7.5 The ISA shall also assess the documentation of systems interfacing with the Signalling System as well as documentation related to Operation and Maintenance.
- 6.7.6 The ISA documentation review shall include audit and assessment of the Contractors' reports on EMC/EMI analysis and test data.

## **6.8 Safety Audits**

- 6.8.1 The Safety Audits are intended to check that the tasks being conducted by the Contractor are adequate and have been carried out in accordance with the respective Safety management systems, declared processes and project Safety plan.
- 6.8.2 Safety Audits will be applicable to processes, techniques, measures and system design and implementation issues.
- 6.8.3 Overall, Safety Audits shall focus on examination of the organization, processes and practices outlined in the Safety plan. However, the Safety plan is also expected to meet certain minimum requirements. A Safety Audit agenda is normally structured on the Safety Plan but additional items may also be included as considered appropriate by the Assessor.
- 6.8.4 A number of Safety audits are planned during the course of the Project. The audit of Signalling System shall be conducted at the Contractor's premises and the Project sites.
- 6.8.5 The Audit process shall consist of three activities:
  - Planning the Safety Audit and producing the audit schedules;
  - Executing the audit schedules; and



- Preparing the Safety Audit Report.
- 6.8.6 For each audit, the ISA Audit Plan shall outline the:
- Audit requirements and purpose;
  - Audit activities to be undertaken;
  - Identification of documents to be examined; and
  - Audit duration.

## 7.0 Programme of Works

- 7.1 The ISA shall carry out its Independent safety assessment and audit works in conjunction with the Project program. For each safety critical and safety related system, the Independent Safety Assessor shall propose a program of assessments and audits which will be detailed in the Independent Safety Assessment Plan.
- 7.2 As a minimum, the Independent Safety Assessments and Audits shall be undertaken during the following phases of delivery of each Safety critical and Safety related sub-system:
- Design phase;
  - Manufacturing / installation phase;
  - Testing and commissioning phases; and
  - System handover for operations and maintenance.

## 8.0 Interim ISA Reports

The ISA shall produce draft Independent Safety Assessment report after each assessment (or a draft Independent Safety Audit Report in case of an Audit).

The draft report shall be sent to the Contractor for comments within 10 working days after completion of each assessment or audit.

The ISA shall revise the draft report giving due consideration to the Contractor's comments. The revised report shall be submitted within 5 working days after the comments are received by the ISA.

## 9.0 Observation Management and Tracking Log

- 9.1 The ISA's findings shall be recorded through Observations. For each Observation identified during an Independent Safety Assessment or Audit, a classification will be assigned to facilitate management action. These shall be as follows:

|              |  |
|--------------|--|
| Category I   | Issue is sufficiently important to require immediate resolution prior to recommending any related deliverable to be moved to next stage of development lifecycle.                                      |
| Category II  | Issue is sufficiently important to require resolution within 3-6 months, but the related deliverable can be moved to next stage of development lifecycle (possibly with a protective control measure). |
| Category III | Issue is highlighted for minor error or as recommendation for improvement. Follow up action is not a must.   |

- 9.2 In the course of the works, the ISA shall prepare and maintain a log of ISA observations. This log shall describe each observation, the category and status of each observation, Contractor's responses to each observation and ISA's evaluation of these responses and in the event of closure of an observation, the reasons for closure. A copy of the ISA observation log shall be provided to the Engineer on a monthly basis as a minimum and upon request.

## 10. Structure of Reports

The Reports shall generally include the following information:

- An Executive summary describing the service performed, the results of the assessment, recommendations and conclusion;
- Details of Audit performed wherever applicable including records of discussion (viz., Minutes of Meeting with Contractor's Representative) results of the audit, recommendations and conclusion;
- A Technical summary;
- A detailed Technical assessment report;
- Reference to standards and documents used;
- The Hazard log;
- Hazard resolution progress;
- Allotted time for corrective measures.

## 11.0 Deliverables:

### 11.1 Safety Assessment Plan

- (1) Based on the Preliminary Safety Assessment Plan proposed by the ISA at Tender stage as well as initial discussions with the Engineer and the Contractor, the ISA shall produce a refined Safety Assessment Plan **within 45 days** of award of contract. This Plan shall be submitted to the Engineer for approval.
- (2) The Safety Assessment Plan shall cover, as a minimum, the following areas:
  - The ISA's organization for the discharge of his services and the way this organization shall liaise with the other parties. In particular, he shall produce an organization chart identifying the key personnel, their roles and responsibilities;
  - The Safety Assessment Programme shall detail each assessment task in a scheduled manner based on the Contractor's Works Programme;
  - A comprehensive list of deliverables to be issued by the ISA during the various phases of the Project in accordance with this schedule;
  - The method used by the ISA to fulfil his obligations and ascertain that the safety studies produced by the Contractor have reached their intended objectives;
  - The resources proposed to be used by the ISA for each specific safety task, there shall be unique dedicated individual having relevant and proven level of competence. Individual curriculum vitae presented by the ISA as part of his Preliminary Assessment Plan shall be confirmed here, and any additional resources shall be documented along with their Curriculum vitae for the Employer's approval;
  - A preliminary list of installations proposed to be audited during the various phases of the Project;
  - A comprehensive list and description of the tools to be used by the ISA to support his assessment activities.
  - The ISA shall review the requirements for the System assurance specified in the General Specification Vol. II, Particular Specification (Signalling) Vol. III for STP-5 and General Specifications Vol. II, Particular Specification Vol. III for STP-5A for developing the Safety assessment plan.

The Safety Assessment Plan shall be submitted as part of **Report No.1**. The Safety Assessment Plan shall be reviewed every three months over the course of the Project and any updation will be reported through Quarterly/Monthly Progress Report.

### 11.2 Assessment of the Contractor's Plans

The Assessor shall review the Safety related elements of the various Plans issued by the Contractor at the beginning of the Design phase.

Assessment Report 1 is to be produced by the ISA and shall provide recommendations to the Engineer and the Contractor for the improvement of the various plans.

At the end of the allocated time for each of the corrective measure, the ISA shall audit their implementation and follow up the same in the Tracking log.

### **11.3 Design Assessment**

11.3.1 The ISA shall conduct an Independent Safety Audit at the Contractor's Design office (located at Bengaluru and Jaipur) for assessment of Safety aspects at various stages of design and development process.

11.3.2 The ISA shall focus on:

- Hazard analysis;
- Hazard management process and Hazard Log;
- Generic Product Safety Case and Generic Application Safety case;
- Safety management processes and procedures;
- Quality management processes and procedures;
- Technical design process;
- Technical V&V process;
- Data preparation process and Tools;
- Project Organization and competency;
- Requirement management;
- Safety requirements;
- Interface managements;
- System Safety Plan.

11.3.3 The Design assessment shall include, but not be limited to:

- (1) Completeness of the system and sub-system requirements, derived from specifications and hazard analysis;
- (2) Assessment of the risks, the residual risks, and their acceptability;
- (3) Integrity levels definition and allocation;
- (4) Assessment of the ability/implementation of the generic system and sub-systems architectures and safety techniques to sustain the required Safety Integrity Level;
- (5) Assessment of the Verification and Validation methods (analysis and tests) defined by the Contractor in order to demonstrate the compliance of the safety components with their allocated Safety objectives;
- (6) Assessment of the Verifications and Validation methods (analysis and tests) defined by the Contractor in order to demonstrate the safety of the data (application data of vital equipment) to be used throughout the project;
- (7) Assessment of the Hazard logs (including updates) created by the contractor and issue requisite recommendation to all parties;
- (8) Assess robustness of processes implemented to validate safety critical aspect of Software design;
- (9) Assessment of procedures prescribed for mitigating residual risks;
- (10) The residual risks that cannot be eliminated through design shall be identified and procedure-controlled (Operation and/or maintenance procedures) mitigation measures suggested. The operational procedures shall cover:
  - Normal operations
  - Degraded operations
  - Emergency operations

The ISA shall assess procedures prescribed for mitigating residual risks. He shall also assess the Verification method dedicated to the safety assurance of the Operation and maintenance rules and procedures.



11.3.4 The ISA shall assess if all safety related aspects of design have been properly addressed and comprehensively verified and give recommendations to the Engineer and the Contractor for improvements.

The assessment shall be the subject of **Report 2**.

#### **11.4 Manufacturing & Installation Audit and Assessment**

During Manufacturing and Installation phase, the ISA shall assess the safety aspects of Verification, Validation, Test & Acceptance including plans, specifications, procedures, test results, Verification and Validation (V&V) reports, especially of those equipment that have been identified during the Design phase as Safety critical. Upon receipt of the System and Sub-systems' Test plans and Test specification documents, the Assessor shall perform the assessment of the implemented system. The assessment shall in particular assess the adequacy of the Verification & Validation (V&V) test specifications and program with regards to the Safety requirements.

The assessment results shall be the subject of **Report 3**.

Furthermore, the equipment which are Safety critical shall be the subject of site installation auditing by the Assessor. The ISA shall audit the Project Site Office (proposed at Rewari, Srimadhapur, Chandwal (near Marwar), Sabarmati and Makarpura ) and the Site for the same. The audit shall focus on:

- Hazard Log status;
- Safety Management Activities and Evidence;
- Quality Management Process and Evidence;
- Verification and Validation activities;
- Factory Acceptance Test;
- Site Installation and Static Test;
- Requirements Management;
- Safety Requirements Validation;
- Interface test.

Auditing results shall be forwarded to the Engineer and all relevant parties in **Report 4**.

#### **11.5 Testing & Commissioning Audit and Assessment**

11.5.1 The ISA shall conduct an Independent Safety Audit of the process, activities, procedures and problem reports of the Engineering Safety Validation activities including static tests, dynamic tests, and Integrated testing.

Engineering Safety Validation provides confirmation, by examination and provision of objective evidence(s), that the particular functional requirements for the safe performance of the System functions (including the successful performance of the established hazard mitigation measures that are identified during the Design stages) have been fulfilled.

The Engineering Safety Validation to be assessed by the Assessor shall focus on the Contractor's Engineering Safety Validation Plan, which shall include:

- The scope of the activities to be carried out during the Testing & Commissioning period, including all static and dynamic tests, integrated and dynamic tests and commissioning, and covering all safety critical functions
- The segregation of all Testing & Commissioning activities from residual construction activities.
- The procedures required to conduct all Testing & Commissioning activities safely, including where necessary, the protection measures for any part of the Signalling System which may be in operation
- The processes to be implemented to validate the safety critical aspects of software installation and testing.
- The processes required to control and validate the safety implications and modifications carried out during the period of Testing & Commissioning

- The processes required to assess the safety implications of the results of tests and inspections carried out during the period of Testing & Commissioning
- The arrangements to record report and investigate accidents and incidents together with the systems necessary to formulate and implement measures to prevent occurrences of accidents and incidents.

The results of the audit shall be the subject of **Report 5**.

**11.5.2 Engineering Safety Validation case Safety Assessment:** At the end of the Testing & Commissioning process but before Trial running, the Contractor shall establish that all identified hazards can be satisfactorily closed. The same shall be assessed by ISA. The ISA shall examine the Safety evidence of the project. The evidence will include Safety Cases, Hazard logs, V&V reports, Test report, Requirements Traceability Matrix etc.

The results of this assessment shall be the subject of **Report 6**.

**11.6 Operation & Maintenance process assessment**

The Contractor shall aid the Employer for Operation & Maintenance preparation through Operation manual, Maintenance manual and Maintenance management system.

The Operation & Maintenance process shall be assessed by the Assessor, to ensure they comprise activity regulations to insure safety during the operation & maintenance.

The results of this assessment shall be the subject of **Report 7**.

**11.7 Trial Running Tests assessment**

After completion of the System Acceptance Tests, and as a prerequisite to revenue service, the Contractor shall conduct Trial running tests involving day-to-day operation of the System. These tests shall include the demonstration of all routine and emergency procedures associated with Operation of the line.

The assessment of the Trial Running Test Plan, tests procedures and tests results shall be the subject of **Report 8**.

**12.0 Safety Assessment of Generic Products used in Signalling System**

- 12.1 The Contractor is permitted to import Signalling products – ‘Electronic Interlocking’, ‘Digital Axle Counter’ and ‘*Train Protection & Warning System*’ from non RDSO approved firms with the condition that the firm supplying the equipment shall be got approved for manufacture and supply of the said equipment in due course either from RDSO or from DFCCIL.
- 12.2 The Safety assessment of these Signalling Generic products - ‘Electronic Interlocking’, ‘Digital Axle Counter’ and ‘*Train Protection & Warning system*’ will be done by the ISA as per DFCCIL Cross Acceptance/approval policy placed at Appendix I.
- 12.3 The Manufacturer of these equipment shall submit the Safety case and other documents to ISA for assessment. The ISA shall prepare the Safety assessment report clearly recommending the equipment for i) Type test and Trials, ii) Field trials iii) Use on DFCCIL. (as applicable).
- 12.4 The Type test and Field Trial Plans (as applicable) will be reviewed by the ISA. The Manufacturer shall organize the Type test and Field Trials in consultation with the Engineer/Employer. . The ISA shall assess the results of Type tests and Field Trials and recommend the Cross Acceptance/approval of the equipment for use in DFCCIL.
- 12.5 The responsibility of various stakeholders viz. Contractor/Manufacturer/Supplier, Employer, Engineer (PMC) and ISA are detailed in Cross Acceptance Responsibility matrix for ISA placed at Appendix II.
- 12.6 Unlike Safety Assessment of the Signalling System, the ISA will not be required to submit Assessment/Audit reports. Instead, the progress of Cross Acceptance/approval shall be submitted on monthly basis.

## 13.0 Quarterly Progress Reports

- 13.1 The ISA shall submit Quarterly Progress Report of their work – Independent Safety Assessment of Signalling System and Monthly Progress Report for Independent Safety Assessment of Signalling Generic Products
- 13.2 The Quarterly Progress Reports shall include an Executive summary and contain a clear and concise analysis statement in respect of every significant aspect of the ISA services, including without limitation:
- Programme and progress
  - Schedule of submissions made to the Engineer/Employer with dates
  - Decisions awaited from the Engineer/Employer
  - A report on safety assessment of Generic products
  - A report on Safety and progress of the Safety Management Plan
  - Updation to Safety Assessment Plan
  - Tracking log
  - An exception report highlighting problem areas and the steps taken to resolve them
- Each progress report shall contain a next quarter anticipated program.

## 14.0 Final Safety Assessment

### 14.1 Signalling Products – Electronic Interlocking, Digital Axle counter and train Protection & Warning System

After completion of Safety assessment of the Generic product, the ISA shall submit a Final Safety assessment report confirming that

- (1) The Safety Assessment has been carried out as per “Procedure order for cross Acceptance/Approval of Software Embedded Electronics systems and New/Imported technology Products for Railway Signalling for DFCCIL”.
- (2) The Safety assessment has been done in compliance to relevant RDSO specification for the product.
- (3) The product meets/does not meet the Safety Integrity level 4 (SIL 4) requirements.
- (4) The product is recommended/ not recommended for use on the Project.

The Final Assessment report will be reviewed by the Engineer and accepted by the Employer.

### 14.2 Signalling System

At the end, the Assessor shall prepare a Final Safety Assessment Report to conclude the assessment activities and results. The Final Assessment report will be based on the Safety audit Reports, Safety Assessment Reports and the status of ISA findings in the ISA Log. In the Final assessment Report, the ISA shall confirm that:

- (1) The System has adhered to applicable SIL 4 level process from Design to Testing and commissioning stages, including application data of Vital equipment for the Signalling system;
- (2) The Safety requirements are sufficiently defined and the Signalling System is compliant with all Safety requirements; and Safety risks for each safety related and safety critical sub-system have been correctly identified and reduced to an acceptable level; and the Signalling System is capable of being operated and maintained to an adequate level of safety;
- (3) All necessary safety documents in particular the various system and subsystems safety cases have been produced, assessed and approved accordingly.

- 15.1 **Number of copies of deliverables:** The ISA shall send a hardcopy of the reports/deliverables ( duly authenticated) to the Employer, Engineer, and the Contractor. Additional copy will be marked to the Corporate office/DFCCIL. The details of the designated officials with addresses will be specified in the Communication protocol for this work to be issued after the award of the contract.
- 15.2 Two Hard bound copies each of the following CENELEC standards ( latest version ) along with necessary Licence/authority to use the specifications shall be submitted to the Employer ( Corporate office) along with Report no.1.
- IEC 62278
  - IEC 62425
  - IEC 62279
  - IEC 62282
  - IEC 60571
  - IEC 62236
  - IEC 62427

## 16.0 Staffing for Assessor Services

- 16.1 The firm shall regulate deployment of key experts deployment as per the progress of the STP5 and STP5A contracts. The firm shall seek and obtain consent of Employer at appropriate level, i.e. not below the level of CPM/ GM of DFCCIL. Depending on the pace of the progress on the project, DFCCIL may require firm to adjust and regulate the deployment of their personnel.
- 16.2 The requirement of key experts for completing the proposed work as per TOR within the stated completion period shall be assessed by the firm in the following broad categories suggested below. The firm shall take this into consideration while preparing his proposal for Organization and Staffing to be submitted with the bid offer.

### 16.2.1 Signalling System / Generic Products

| <b>Key Experts /experts/secretarial staff</b> |               |
|---|---------------|
| 01:   | Assessor      |
| 02:   | Dy Assessor   |
| 03:   | System Expert |
| 04.   | Secretary     |

### 16.3 The Qualification criteria of key experts shall be as given below

|                 |  |  |
|-----------------|--|--|
| Assessor        | Academic qualification                   | Minimum Bachelor's Degree in Relevant field.                   |
|                 | General Work Experience                  | Minimum 20 years   |
|                 | Experience in Railway/Transport Projects | minimum 10 years   |
|                 | Experience as Assessor                   | Minimum 5 years  |
| Deputy Assessor | Academic qualification                   | Minimum Bachelor's Degree in the discipline of Relevant field. |
|                 | General Work Experience                  | Minimum 20 years   |
|                 | Experience in Railway/Transport Projects | Minimum 10 years   |

|               |   |   |
|---------------|---|---|
|               | Experience as Deputy Assessor or higher level | Minimum 3 years                                 |
| System Expert | Academic qualification                        | Minimum Bachelor's Degree in the relevant field |
|               | General Work Experience                       | more than 12 years                              |
|               | Experience in Same/Similar Position           | more than 3 years                               |
|               |   |   |

## 17. Deficiency of Services

The Services shall have to be completed in all respect by the ISA within a time period as specified in SC 2.4. ISA shall deploy manpower commensurate with the progress of underlying Contracts.

**The ISA shall interface with the STP5,STP5A contractors and respective Engineers/representative of the Client to finalise a time line for submission and finalization of various reports timely, keeping in view the key dates for various activities as per Section 8 and as updated/modified by the Client. This shall be done before finalizing the Safety Assessment plan.**

**The ISA shall adhere to the agreed time lines failing which may attract Liquidated damages as specified in SC 2.10 for any delay resulting in delay in the project implementation key dates. The Client reserves the right to modify the agreed time line and the Client's decision shall be final and binding.**

## 18. Duration, deployment and completion of Consultancy Service

- 18.1 The ISA services to be performed under this tender shall be in synchronization of the Contracts STP5 and STP5A and as updated/modified (if any) by STP5 and STP5A during contract period (SC2.4). The key dates/milestones for these contracts is as mentioned in section 8. **The deliverables shall be completed timely so as to comply with the key dates laid down by the Contractor for STP5 and STP5A.** The ISA work for Signalling Products shall be taken up simultaneously for all products so that the Certification of all the products is available almost at the same time leading to commissioning of the section as per the key dates.
- 18.2 ISA shall regulate the deployment of its personnel as per the progress of the contracts for STP 5 and STP 5A.
- 18.3 The Contract shall be completed on submission by ISA and acceptance by the Client of all the deliverables and successful commissioning of the section Rewari to Makarpura and issue of Completion Certificate by the Client to ISA.

## Appendix-I

### **PROCEDURE ORDER FOR CROSS ACCEPTANCE/APPROVAL OF SOFTWARE EMBEDDED ELECTRONICS SYSTEMS AND NEW/IMPORTED TECHNOLOGY PRODUCTS FOR RAILWAY SIGNALLING FOR DFCCIL**

#### **I. Preface**

- (a) These guidelines are meant for evaluating software embedded electronic systems and new/imported technology products for Railway signaling, which are already in use on a passenger carrying service anywhere in the world at speed more than 100KMPH, for adoption on DFCCIL using the concept of cross acceptance/cross approval. The procedure outlined in relevant CENELEC or any other equivalent standards to define and verify the safety requirements form the basis of these guidelines.
- (b) These guidelines are applicable for evaluation of equipment against valid Contract Agreement with DFCCIL. These guidelines are to be applied as per requirement of respective Contract Agreement.
- (c) These guidelines do not absolve the Contractor of his overall responsibility towards the relevant contract(s) in any manner whatsoever.

#### **II. Object:**

The object of these guidelines is to outline the process, activities, responsibilities and documentation necessary to carry out the Cross Acceptance / Cross Approval exercise by DFCCIL.

#### **III. Responsibility of Safety Assurance:**

- (a) Safety clearance shall be given adopting the guidelines pertaining to Cross Acceptance/Cross Approval for adoption on DFCCIL. This will include the System Hardware & Software Platform, Application software for implementing Safety Functions, Communication Interfaces, Input/Output modules, Power Supply (vital) Systems & other related equipment.
- (b) This approval for a particular product/system will be requested by the manufacturer of the system, through the Contractor. The manufacturer will be responsible for submission & authenticity of the documentation. The documentation should be as per procedure laid down.

#### **IV. Applications:**

These guidelines shall be applied for evaluation & acceptance of all Software Embedded Electronic Safety Systems and New/Imported Technology Products for Railway Signalling for provision on DFCCIL.

The Electronic systems/products are as under:

- (i) Electronic interlocking, Digital Axle Counters and Train Protection and Warning System
- (ii) STEP items to be supplied on account of STEP loan conditions



## v. Procedure:

1. DFCCIL shall appoint an ISA for safety assessment of the equipment.
2. Contractor of the project shall ensure that manufacturer extends complete cooperation to DFCCIL/ISA/PMC.
3. Manufacturer shall depute his technical personnel for technical clarifications when required by DFCCIL/ISA/PMC.
4. The manufacturer/firm shall submit a Safety Plan to DFCCIL/ISA/PMC for evaluation of the system/equipment for Cross Acceptance/Approval. All documents shall be prepared in English language, checked & verified & marked appropriately indicating their version number, no. of alterations, etc.
5.
  - (a) Safety plan shall be prepared and submitted. This will include:-
    - (i) System description, which includes the system architecture /configuration, system design & safety principle adopted for hardware & software.
    - (ii) Safety Integrity Level of the system
    - (iii) Safety case
  - (b) Manufacturer shall check and verify that the system being offered meets the requirement of safety integrity laid down in the specifications.
  - (c) Safety Case is documentary evidence that the safety system is conforming to and complies with the laid down safety requirements for it. Safety Case will have to be prepared in accordance with relevant CENELEC or equivalent standards & submitted to DFCCIL/ISA/PMC as the case may be for assessment. Safety case shall consist of the following documents:
    - (i) Details of approval given by an authority responsible for clearing safety system for use on a passenger carrying service at speed of more than 100 KMPH anywhere in the world.
    - (ii) Standards to which the equipment have been developed and proposed to be supplied, i.e., CENELEC standard or any other equivalent standard adopted by that passenger-carrying Railway.
    - (iii) Details of agencies, which have done software/hardware validations.
    - (iv) Criteria adopted and assumption made.
    - (v) Documentation of these approvals, including trials, tests & measurements and simulation carried out.
    - (vi) Restrictions, precautions, conditions or limitations imposed while giving clearance and thereafter action taken by the manufacturer.
    - (vii) Calculations of Hazard rate or rate of unsafe side failure.
    - (viii) Details/documents related to installation, functional operation, maintenance & modifications. Part list, wiring diagram, cable requirement, and list of tools and measuring equipments along with specification shall be given.
    - (ix) Performance feedback duly authenticated and certified by various user Railways. Name, Designation, Phone & FAX Nos. and address of the official certifying the performance feedback should be clearly available. This will include Mean Time Between Failures (MTBF) and Mean Time Between Wrong Side Failures

(MTBWSF) and Mean Time To Repair (MTTR) figures as per format given in Annexure 'A'.

- (x) Software & related instructions to configure the system initially as well as later due to changes in yard layout.
  - (xi) Complete history of development of the equipment shall be given. Modifications carried out in the system, if any, during last five years shall be listed. Date of each modification with brief reasons for undertaking modification and whether modification has got approval of original validation/approving agency. Version No. allotted after each modification shall be mentioned.
  - (xii) Type test (if required), Routine tests (which must be carried out on each equipment by the manufacturer) and acceptance tests (which are to be carried out on the equipment in the firm's premises before delivery) formats with test procedures and its significance for safety/reliability assessment of equipment. Sample routine test report/type test report/ factory acceptance test reports shall be submitted
  - (xiii) Details of climatic/EMI (Electro Magnetic Interference)/EMC (Electro Magnetic Compatibility) tests undergone by the equipment. Test reports of an accredited test laboratory (third party) shall be submitted. (The equipment shall also be subjected to environmental tests as per specification if not already done by some other reputed agency to the specified severity).
  - (xiv) Clause wise compliance statement to the specification and
  - (xv) statement whether system is suitable for DFC application or will require modifications. Updated history of application has to be submitted in the format as per Annexure 'B' for use in passenger carrying service at speeds of more than 100 kmph.
6. The Safety Integrity Requirement/Level for all vital applications for LC gates, station & Block Signaling & Interlocking systems / equipment / Track Circuits to be used on DFC, shall be SIL-4. In case, any system is required to have a SIL other than Safety Integrity Level-4 (SIL-4), DFCCIL approval shall be obtained before evaluating the system for Cross Acceptance.
7. The evaluation for Cross Acceptance shall normally be in compliance to the relevant specifications.
8. Provenness criteria of equipment usage of same Type/Make & Model/Version shall be as under: -

| Sl. No. | Category of Equipment/System                               | Minimum no. of Equipment | Equipment Hours in use |
|---------|--|--------------------------|------------------------|
| 1.      | Digital Axle Counter                                       | 50                       | 4,32,000               |
| 2.      | TPWS (i) On Board Equipment<br>(ii) Track Equipment Balise | 25<br>100                | 2,16,000<br>8,64,000   |
| 3.      | Electronic Interlocking                                    | 25                       | 2,16,000               |
| 4.      | Other items  | 100                      | 8,64,000               |

**Note 1:** For all the above items: At least 20% of the equipment/system, with a minimum of 10, should be in continuous operation for a minimum period of 720 days.



**Note 2:** If the offered equipment has undergone minor hardware/software upgradation to improve functionality/safety of the equipment in recent past, then the equipment utilization of the earlier version (prior to minor modifications) can be considered for the provenness. This decision of considering the earlier version for provenness shall be taken by DFCCIL. However, in such cases, a minimum of 10 (Ten) upgraded equipments should be in continuous operation for a minimum period of 180 days. Field trial of the equipment shall be conducted as detailed at Annexure C.

**Note 3 :** STEP items to be supplied, as part of tied Japanese loan, if not deployed for commercial service anywhere, shall be subjected to type test and field trial as detailed at Annexure 'C'.

9. The manufacturer shall have adequate skilled and trained manpower with good expertise in relevant fields of manufacturing, installation, training, maintenance support etc. Details of these personnel with name, educational qualification, training undergone & experience shall be furnished at the time of approval.
10. Manufacturer seeking approval shall guarantee for supply of spares during life of the equipment & extend maintenance support.
11. The firm shall provide all necessary test facilities to DFCCIL representative in their premises in India and abroad as prescribed by their principals at the time of approval.
12. DFCCIL/ISA/PMC shall assess the safety case & prepare the assessment report clearly recommending ( as applicable) whether the system/equipment is permitted for:-
  - a. Type test and trials
  - b. Field trials
  - c. Use on DFC
13. The type tests and field trials, as required, shall be conducted as per Annexure "C". After DFCCIL/ISA/PMC is satisfied with the documents submitted by the firm; results of the type test and field trial, if any; approval for the particular contract shall be given.
14. If any document of safety case is withdrawn or if any problem with the product arises, the supplier shall inform DFCCIL immediately. In such or any similar case DFCCIL may modify/withdraw the approval, as required.
15. In the case where evidence of Type tests of the Base model from an accredited laboratory is available, for any exigency, Type Tests for modified model may be carried out in partial modification of the sequence laid down in clause 12 above and/or sequence of validation of the Type test as per Cross acceptance responsibility matrix ( Appendix II). Type tests may precede the Safety case assessment report or Validation of the Type test plan by ISA. However, the ISA shall carry out his assessment/validation as per the stipulated clauses.



**Annexure'A'****Format for Performance Feedback**

1. Name of System/Equipment :
2. Make :
3. Model/Version No. :
4. User Railway & Section :
5. Maximum Sectional Speed :
6. Arrange number of Trains per day :
7. Application of System/Equipment :
8. Problems faced and solutions evolved :
9. Failure data may be submitted as per format given below :

| Location     | No. of System / Eqpt | Date of commissioning | Total hours in use | No. of safe side failures | No. of unsafe failures | MTBF | MTBWSF | MTTR |
|--------------|----------------------|-----------------------|--------------------|---------------------------|------------------------|------|--------|------|
|              |                      |                       |                    |                           |                        |      |        |      |
|              |                      |                       |                    |                           |                        |      |        |      |
|              |                      |                       |                    |                           |                        |      |        |      |
|              |                      |                       |                    |                           |                        |      |        |      |
| <b>Total</b> |                      |                       |                    |                           |                        |      |        |      |

**Annexure'B'**

## Format for history of Application

| <b>Sl<br/>NO</b> | <b>Hardware<br/>version No.</b> | <b>Software<br/>version No.</b> | <b>Model<br/>No.</b> | <b>User<br/>Rly.</b> | <b>Station/<br/>Section</b> | <b>No. of<br/>Eqpts<br/>. In<br/>use</b> | <b>In use from date</b> |
|------------------|---------------------------------|---------------------------------|----------------------|----------------------|-----------------------------|--|-------------------------|
|                  |                                 |                                 |                      |                      |                             |  |                         |
|                  |                                 |                                 |                      |                      |                             |  |                         |
|                  |                                 |                                 |                      |                      |                             |  |                         |

**Annexure 'C'****Type test for Signaling items**

In case DFCCIL is fully satisfied with the consolidated report of the assessment, approval shall be given for type testing of prototype sample.

1. The type testing of prototype sample shall be undertaken to the satisfaction of DFCCIL.
2. Type tests shall be carried out on specific items to ensure that they perform their intended functions when subjected to all permutations and combinations of external environment and other factors.
3. The following tests shall constitute type tests :
  - (i) Visual inspection tests
  - (ii) Insulation resistance tests
  - (iii) Card level functional and fail safety tests
  - (iv) System level functional and fail safety tests
  - (v) Computerized testing
  - (vi) EMI/EMC tests
  - (vii) Environmental / Climatic Tests
  - (viii) System Diagnostic Tests
  - (ix) System Software Test
  - (x) Any other test deemed necessary
4. Manufacturer shall submit a comprehensive type test plan including procedure, type test format and expected results. The type test plan shall be finalized in consultation with DFCCIL / ISA / PMC.
5. Type tests shall be carried out at manufacturer's premises. Necessary testing equipments and competent man power shall be made available by the manufacturer.
6. Type test shall be carried out by DFCCIL representative/ISA (Please refer Appendix II) Cross acceptance responsibility matrix.
7. Tests which cannot be carried out in house may be referred to independent test house of repute.
8. EMC / EMI tests may not be required if previous independent witness tests have been successfully carried out and reported by document.

**Field trials for Signaling items**

1. The field trials shall be conducted to the satisfaction of the DFCCIL.
2. The field trials shall be held on Indian Railways / DFC as decided by DFCCIL.

DFCCIL shall coordinate with IR for this purpose.

3. The Contractor / Manufacturer shall make all arrangements for conducting field trials. This shall include; but not limited to; supply, installation, commissioning and monitoring of the equipment.
4. The trials shall be monitored in the following manner –

| S N | Name of Division / Railway / Section | Name of station | Model and version no. | Date of installation | No. of failures* | Remarks |
|-----|--------------------------------------|-----------------|-----------------------|----------------------|------------------|---------|
|     |                                      |                 |                       |                      |                  |         |
|     |                                      |                 |                       |                      |                  |         |
|     |                                      |                 |                       |                      |                  |         |

\* Analysis of cause of failures to be attached.

#### Duration of field trial

| SN | Item / Equipment | Initial trial   |   |
|----|------------------|---|---|
|    |                  | Number of equipments  | Duration  |
| 1. | EI               | 01  | 180 days in parallel and/or standalone mode or a combination thereof as decided by DFCCIL |
| 2. | DAC              | 01  | 180 days in parallel and/or standalone mode or a combination thereof as decided by DFCCIL |
| 3. | TPWS             | One (01) set of on Board equipment and ten (10) sets of track side system shall be installed and detailed trials shall be conducted for 180 days for compliance to specifications and performance monitoring. |   |

#### NOTE:

1. The number of equipments and duration can be suitably revised, as required, by DFCCIL.
2. DFCCIL shall decide if field trials and type test can proceed simultaneously or not.

**Appendix-II****CROSS ACCEPTANCE RESPONSIBILITY MATRIX**

| S. No. | Activity  | Contractor/<br>Supplier/<br>Manufacturer | DFCCIL | PMC | ISA | Comments             |
|--------|---|--|--------|-----|-----|----------------------|
| 1.     | Appointment of ISA  |  | ✓      |     |     |                      |
| 2.     | Submission of Safety case & other documents to ISA for Cross Approval | ✓  |        |     |     | Copy to DFCCIL & PMC |
| 3.     | Preparation of assessment report based on safety case & documents     |  |        |     | ✓   |                      |
| 4.     | Review of assessment report (Part 1)                                  |  |        | ✓   |     |                      |
| 5.     | Review & approval of Assessment report (Part 1)                       |  | ✓      |     |     |                      |
| 6.     | Submission of type test plan  | ✓  |        |     |     |                      |
| 7.     | Validation of type test plan  |  |        |     | ✓   |                      |
| 8.     | Review of type test plan  |  |        | ✓   |     |                      |
| 9.     | Approval of type test plan  |  | ✓      |     |     |                      |
| 10.    | Conduct of Type tests   | ✓  | ✓      | ✓   |     |                      |
| 11.    | Submission of Type Test Report  | ✓  |        |     |     |                      |
| 12.    | Review & recommendation of Type Test Report                           |  |        |     | ✓   |                      |
| 13.    | Recommendation of Type Test Report                                    |  |        | ✓   |     |                      |
| 14.    | Approval of type test report  |  | ✓      |     |     |                      |
| 15.    | Supply, Installation & commissioning of Field Trial Equipment         | ✓  |        |     |     |                      |
| 16.    | Monitoring of Field Trial   | ✓  | ✓      | ✓   | ✓   |                      |
| 17.    | Submission of Field Trial Report                                      | ✓  |        |     |     |                      |
| 18.    | Submission of Final Safety Assessment report                          |  |        |     | ✓   |                      |
| 19.    | Review of Final Safety Assessment report                              |  |        | ✓   |     |                      |
| 20.    | Approval of Final Safety Assessment report                            |  | ✓      |     |     |                      |
| 21.    | Factory Acceptance Test of Cross Approved Equipment                   |  | ✓      | ✓   |     |                      |

**NOTE:** The Employer/ Engineer/ ISA shall respond to each of the above submissions from the Contractor/Supplier/ Manufacturer at the earliest.

## **Section 6. Form of Contract**



# ANNEX – I

## Contractors' Services: Time-Based Contracts

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**CONTRACT FOR CONSULTANTS' SERVICES**  
**Time-Based**

between

Dedicated Freight Corridor Corporation of India Limited

and

\_\_\_\_\_  
*[name of the Consultant]*

Dated: \_\_\_\_\_

## I. Form of Contract

### TIME-BASED

This CONTRACT (hereinafter called the "Contract") is made the [day] day of the month of [month],[year], between, on the one hand, [name of Client] (hereinafter called the "Client") and, on the other hand, [name of Consultant] (hereinafter called the "Consultant").

**[Note:** *If the Consultant consists of more than one entity all of which are liable under the contract, the above should be partially amended to read as follows: "... (hereinafter called the "Client") and, on the other hand, a Joint Venture/Consortium consisting of the following entities, each of which will be jointly and severally liable to the Client for all the Consultant's obligations under this Contract, namely, [name of Consultant] and [name of Consultant] (hereinafter collectively called the "Consultant").]*

### WHEREAS

- (a) the Client has requested the Consultant to provide certain consulting services as defined in this Contract (hereinafter called the "Services");
- (b) the Consultant, having represented to the Client that it has the required professional skills, and personnel and technical resources, has agreed to provide the Services on the terms and conditions set forth in this Contract;

NOW THEREFORE the parties hereto hereby agree as follows:

1. The following documents attached hereto shall be deemed to form an integral part of this Contract:
  - (a) The General Conditions of Contract;
  - (b) The Special Conditions of Contract including key dates of STP5 and 5A and the following schedules:

- Appendix A Terms of Reference for the work.
- Appendix B Accepted Price schedules.
- Appendix C Form of Advance Payment security
- Appendix D Form of Bank guarantee for Bid security.
- Appendix E Form of Bank guarantee for Performance Guarantee.
- Appendix F Successful bidder's acknowledgement of the LOA
- Appendix G Successful bidder's bid documents with addendums/Corrigendums.
- Appendix H Correspondence between the successful tenderer and the Client  
Pre and post award (if any)
- Appendix I Other documents included in the RFP with addendums/Corrigendums, contractors submissions.
- Appendix J Power of attorney, Integrity Pact and other documents (to be listed).

2. The mutual rights and obligations of the Client and the Consultant shall be as set forth in the Contract, in particular:
- (a) the Consultant shall carry out the Services in accordance with the provisions of the Contract;
  - (b) the Client shall make payments to the Consultant in accordance with the provisions of the Contract;
  - (c) Subject to subparagraph (d) hereunder, and notwithstanding any other provisions of this Contract, payments under this Contract shall not exceed [amount] in Local Currency and [amount] in Foreign Currencies. Except as otherwise agreed between the Client and the Consultant:
    - (i) Foreign currency payments to the Contractor hereunder will be made in [Currency]
    - (ii) Local Currency payments to the contractor hereunder will be made in [Currency]
  - (d) The maximum amount specified in subparagraph I here above has been fixed on the understanding that the Client will make available free of charge to the Consultant the exemptions, assistance, services and facilities provided for under Clause 5 of the General Conditions of Contract. If any such exemptions, assistance, services and facilities are not supplied, the parties shall consult regarding what additional allowance (if any) should be made to the Consultant.

IN WITNESS WHEREOF, the Parties hereto have caused this Contract to be signed in their respective names as of the day and year first above written.

For and on behalf of [*name of Client*]

\_\_\_\_\_  
[Authorized Representative]

For and on behalf of [*name of Consultant*]

\_\_\_\_\_  
[Authorized Representative]

**[Note:** *If the Consultant consists of more than one entity, all these entities should appear as signatories, e.g., in the following manner:*

For and on behalf of the Consultant

[*name of Joint Venture/Consortium Partner*]

\_\_\_\_\_  
[Authorized Representative]

[*name of Joint Venture/Consortium Partner*]

\_\_\_\_\_  
[Authorized Representative]

## II. General Conditions of Contract

### 1. GENERAL PROVISIONS

- 1.1 Definitions** Unless the context otherwise requires, the following terms whenever used in this Contract have the following meanings:
- (a) “Applicable Law” means the laws and any other instruments having the force of law in the Client’s Country, or in such other country as may be specified in the Special Conditions of Contract (SC), in force from time to time.
  - (b) “Client” means the agency with which the selected Consultant signs the Contract for the Services.
  - (c) “Client’s country” means the country of the Client i.e India.
  - (d) “Consultant” means any entity including a Joint Venture that will provide the Services to the Client under the Contract.
  - (e) “Contract” means the Contract signed by the Parties and all the attached documents listed in its Clause 1, that include these General Conditions (GC), the Special Conditions (SC) by which the GC may be amended or supplemented, and the Appendices.
  - (f) “Day” means calendar day.
  - (g) “Effective Date” means the date on which this Contract comes into force and effect pursuant to Clause GC 2.1.
  - (h) “Foreign Currency” means any currency other than the currency of the Client’s Country.
  - (i) “Government” means the Government of the Client’s Country.
  - (j) Deleted.
  - (k) “Joint Venture” means a Consultant which comprises two or more Partners each of which will be jointly and severally liable to the Client for all the Consultant’s obligations under the Contract.
  - (l) “Local Currency” means the currency of the Client’s Country.
  - (m) “Partner” means any of the entities that make up the Joint Venture; and “Partners” means all these entities.
  - (n) “Party” means the Client or the Consultant, as the case may be, and “Parties” means both of them.

- (o) "Personnel" means qualified persons provided by the Consultant and assigned to perform the Services or any part thereof.
- (p) "Reimbursable expenses" means all assignment-related costs other than Consultant's remuneration.
- (q) "Services" means the work to be performed pursuant to this Contract.
- (r) "Sub-Consultant" means any person or entity to whom/which the Consultant subcontracts any part of the Services and for whom/which the Consultant is fully responsible.
- (s) "Third Party" means any person or entity other than the Government, the Client, the Consultant or a Sub-Consultant.
- (t) "In writing" means communicated in written form with proof of receipt.

- 1.2 Relationship between the Parties** Nothing contained herein shall be construed as establishing a relationship of master and servant or of principal and agent as between the Client and the Consultant. The Consultant, subject to this Contract, has complete charge of Personnel and Sub-Consultants, if any, performing the Services and shall be fully responsible for the Services performed by them or on their behalf hereunder.
- 1.3 Law Governing Contract** This Contract, its meaning and interpretation, and the relation between the Parties shall be governed by the Applicable Law.
- 1.4 Language** This Contract has been executed in the language specified in the SC, which shall be the binding and controlling language for all matters relating to the meaning or interpretation of this Contract. Furthermore, all reports and correspondence required during implementation of the Services shall be in the language specified in the SC.
- 1.5 Headings** The headings shall not limit, alter or affect the meaning of this Contract.
- 1.6 Notices**
- 1.6.1 Any notice, request or consent required or permitted to be given or made pursuant to this Contract shall be in writing. Any such notice, request or consent shall be deemed to have been given or made when delivered in person to an



authorized representative of the Party to whom the communication is addressed, or when sent to such Party at the address specified in the SC.

1.6.2 A Party may change its address for notice hereunder by giving the other Party notice in writing of such change to the address specified in the SC.

- 1.7 Location** The Services shall be performed at such locations as are specified in TOR hereto, where the location of a particular task is not so specified, at such locations, whether in the Client's Country or elsewhere, as the Client may approve.
- 1.8 Authority of Lead Partner** In case the Consultant consists of a Joint Venture of more than one entity, the Partners hereby authorize the Lead Partner specified in the SC to act on their behalf in exercising all the Consultant's rights and obligations towards the Client under this Contract, including without limitation the receiving of instructions and payments from the Client.
- 1.9 Authorized Representatives** Any action required or permitted to be taken, and any document required or permitted to be executed under this Contract by the Client or the Consultant may be taken or executed by the officials specified in the SC.
- 1.10 Taxes and Duties** Unless otherwise specified in the SC, the Consultant, Sub-Consultants and Personnel shall pay such taxes, duties, fees and other impositions as may be levied under the Applicable Law.
- 1.11 Fraud and Corruption** It is required that Consultants, as well as the Client, observe the highest standard of ethics during the procurement and execution of such contracts. In pursuance of this policy, Employer :  
will reject the result of evaluation of proposals if it determines that the Consultant has engaged in corrupt or fraudulent practices in competing for the contract in question;
- 1.12 Deleted.**
- To**
- 1.13**
- 1.14 High Standard of Conduct** The Client requires that the consultant and its Personnel maintain a high standard of conduct when carrying out their functions under this contract. Accordingly, the Consultant and its personnel are expected to recognize the contribution of others, regardless of their nationality, gender, religion, seniority or contractual status. The Client will take

prompt action to address incidents involving conduct that does not live up to these standards, which may result in replacement of any individual expert, consultant or contractual staff involved in such incidents pursuant to Clause GC 4.2(b).

**1.15 Deleted**

**2. COMMENCEMENT, COMPLETION, MODIFICATION AND TERMINATION OF CONTRACT**

- |  |  |
|--|--|
| <b>2.1 Effectiveness of Contract</b>                               | This Contract shall come into force and effect on the date (the "Effective Date") of the Client's notice to the Consultant instructing the Consultant to begin carrying out the Services. This notice shall confirm that the effectiveness conditions, if any, listed in the SC have been met.   |
| <b>2.2 Termination of Contract for Failure to Become Effective</b> | If this Contract has not become effective within such time period after the date of the Contract signed by the Parties as specified in the SC, the Consultant or the Client may, by not less than twenty one (21) days written notice to the other Party, declare this Contract to be null and void, and in the event of such a declaration by either Party, neither Party shall have any claim against the other Party with respect hereto. |
| <b>2.3 Commencement of Services</b>                                | The Consultant shall begin carrying out the Services not later than the number of days after the Effective Date specified in the SC.   |
| <b>2.4 Expiration of Contract</b>                                  | Subject to sub-Clause GC 2.7.3I and unless terminated earlier pursuant to Clause GC 2.9 hereof, this Contract shall expire at the end of such time period after the Effective Date as specified in the SC.   |
| <b>2.5 Entire Agreement</b>  | This Contract contains all covenants, stipulations and provisions agreed by the Parties. No agent or representative of either Party has authority to make, and the Parties shall not be bound by or be liable for, any statement, representation, promise or agreement not set forth herein.   |
| <b>2.6 Modifications or Variations</b>                             | Any modification or variation of the terms and conditions of this Contract, including any modification or variation of the scope of the Services, may only be made by written agreement between the Parties. Pursuant to Clause GC 7.2 hereof, however, each Party shall give due consideration to any proposals for modification or variation made by the other Party.  |

## 2.7 Force Majeure

### 2.7.1 Définition

- (a) For the purposes of this Contract, “Force Majeure” means an event which is beyond the reasonable control of a Party, is not foreseeable, is unavoidable, and which makes a Party’s performance of its obligations hereunder impossible or so impractical as reasonably to be considered impossible in the circumstances, and includes, but is not limited to, war, riots, civil disorder, earthquake, fire, explosion, storm, flood or other adverse weather conditions, strikes, lockouts or other industrial action (except where such strikes, lockouts or other industrial action are within the power of the Party invoking Force Majeure to prevent), confiscation or any other action by Government agencies.
- (b) Force Majeure shall not include (i) any event which is caused by the negligence or intentional action of a Party or such Party’s Sub-Consultants or agents or employees, nor (ii) any event which a diligent Party could reasonably have been expected both to take into account at the time of the conclusion of this Contract, and avoid or overcome in the carrying out of its obligations hereunder.
- (c) Force Majeure shall not include insufficiency of funds or failure to make any payment required hereunder.

### 2.7.2 No Breach of Contract

The failure of a Party to fulfill any of its obligations hereunder shall not be considered to be a breach of this Contract insofar as such inability arises from an event of Force Majeure, provided that the Party affected by such an event has taken all reasonable precautions, due care and reasonable alternative measures, all with the objective of carrying out the terms and conditions of this Contract.

### 2.7.3 Measures to be Taken

- (a) A Party affected by an event of Force Majeure shall continue to perform its obligations under the Contract as far as is reasonably practical, and shall take all reasonable measures to minimize the consequences of any event of Force Majeure.
- (b) A Party affected by an event of Force Majeure shall notify the other Party of such event as soon as possible, and in any case not later than fourteen (14) days following the occurrence of such event, providing evidence of the nature and cause of such event, and shall similarly give written notice of the restoration of normal conditions as soon as possible.

- (c) Any period within which a Party shall, pursuant to this Contract, complete any action or task, shall be extended for a period equal to the time during which such Party was unable to perform such action as a result of Force Majeure.
- (d) During the period of their inability to perform the Services as a result of an event of Force Majeure, the Consultant, upon instructions by the Client, shall either:
  - (i) demobilize, in which case the Consultant shall be reimbursed for costs they reasonably and necessarily incurred, and, if required by the Client, in reactivating the Services; or
  - (ii) continue with the Services to the extent possible, in which case the Consultant shall continue to be paid under the terms of this Contract and be reimbursed for additional costs reasonably and necessarily incurred.
- (e) In the case of disagreement between the Parties as to the existence or extent of Force Majeure, the matter shall be settled according to Clause GC 8.

## **2.8 Suspension**

The Client may, by written notice to the Consultant, suspend in whole or part, the Services if an event shall have happened and be continuing, in which the Consultant fails to perform any of its obligations under this Contract, including the carrying out of the Services.

## **2.9 Termination**

### **2.9.1 By the Client**

The Client may terminate this Contract in case of the occurrence of any of the events specified in paragraphs (a) through (h) of this Clause GC 2.9.1. In such an occurrence the Client shall (except in the case of paragraph (h) below) give not less than thirty (30) days' written notice of termination to the Consultant.

- (a) If the Consultant fails to remedy a failure in the performance of its obligations hereunder, as specified in a notice of suspension pursuant to Clause GC 2.8 hereinabove, within thirty (30) days of receipt of such notice of suspension or within such further period as the Client may have subsequently approved in writing.
- (b) If the Consultant becomes (or, if the Consultant consists of more than one entity, if any of its Partners becomes) insolvent or bankrupt or enter into any agreements with their

creditors for relief of debt or take advantage of any law for the benefit of debtors or go into liquidation or receivership whether compulsory or voluntary.

- (c) If the Consultant fails to comply with any final decision reached as a result of arbitration proceedings pursuant to Clause GC 8 hereof.
- (d) If the Consultant submits to the Client a false statement which has a material effect on the rights, obligations or interests of the Client.
- (e) If the Consultant is held by the Client to have a conflict of interest in performance of the Contract, or any portion thereof.
- (f) If, as the result of Force Majeure, the Consultant is unable to perform a material portion of the Services for a period of not less than sixty (60) days.
- (g) If the Client, in its sole discretion and for any reason whatsoever, decides to terminate this Contract.
- (h) If the Consultant, in the judgment of the Client has engaged in corrupt, fraudulent, collusive or coercive practices in competing for or in executing this Contract in such a case the Contract shall be terminated on the date Consultant is notified of such breach.

#### **2.9.2 By the Consultant**

The Consultant may terminate this Contract, by not less than thirty (30) days' written notice to the Client, in case of the occurrence of any of the events specified in paragraphs (a) through (d) of this Clause GC 2.9.2.

- (a) If the Client fails to pay any money due to the Consultant pursuant to this Contract and not subject to dispute pursuant to Clause GC 8 hereof within forty-five (45) days after receiving written notice from the Consultant that such payment is overdue.
- (b) If, as the result of Force Majeure, the Consultant is unable to perform a material portion of the Services for a period of not less than sixty (60) days.
- (c) If the Client fails to comply with any final decision reached as a result of arbitration pursuant to Clause GC 8 hereof.
- (d) If the Client is in material breach of its obligations pursuant to this Contract and has not remedied the same within forty-

five (45) days (or such longer period as the Consultant may have subsequently approved in writing) following the receipt by the Client of the Consultant's notice specifying such breach.

- 2.9.3 Cessation of Rights and Obligations** Upon termination of this Contract pursuant to Clauses GC 2.2 or GC 2.9 hereof, or upon expiration of this Contract pursuant to Clause GC 2.4 hereof, all rights and obligations of the Parties hereunder shall cease, except (i) such rights and obligations as may have accrued on the date of termination or expiration, (ii) the obligation of confidentiality set forth in Clause GC 3.3 hereof, (iii) the Consultant's obligation to permit inspection, copying and auditing of their accounts and records set forth in Clause GC 3.6 hereof, and (iv) any right which a Party may have under the Applicable Law.
- 2.9.4 Cessation of Services** Upon termination of this Contract by notice of either Party to the other pursuant to Clauses GC 2.9.1 or GC 2.9.2 hereof, the Consultant shall, immediately upon dispatch or receipt of such notice, take all necessary steps to bring the Services to a close in a prompt and orderly manner and shall make every reasonable effort to keep expenditures for this purpose to a minimum. With respect to documents prepared by the Consultant and equipment and materials furnished by the Client, the Consultant shall proceed as provided, respectively, by Clauses GC 3.9 or GC 3.10 hereof.
- 2.9.5 Payment upon Termination** Upon termination of this Contract pursuant to Clauses GC 2.9.1 or GC 2.9.2 hereof, the Client shall make the following payments to the Consultant:
- (a) remuneration pursuant to Clause GC 6 hereof for Services satisfactorily performed prior to the effective date of termination, and reimbursable expenditures pursuant to Clause GC 6 hereof for expenditures actually incurred prior to the effective date of termination; and
  - (b) except in the case of termination pursuant to paragraphs (a) through I and (h) of Clause GC 2.9.1 hereof, reimbursement of any reasonable cost incidental to the prompt and orderly termination of this Contract including the cost of the return travel of the Personnel and their eligible dependents.
- 2.9.6 Disputes about Events of** If either Party disputes whether an event specified in paragraphs (a) through (f) of Clause GC 2.9.1 or in Clause GC 2.9.2 hereof has occurred, such Party may, within forty-five (45) days after receipt of notice of termination from the other Party, refer the

**Termination** matter for dispute settlement in accordance with the procedures stated in Clause GC 8 hereof, and this Contract shall not be terminated on account of such event except in accordance with the terms of any resulting arbitral award.

### 3. OBLIGATIONS OF THE CONSULTANT

#### 3.1 General

**3.1.1 Standard of Performance** The Consultant shall perform the Services and carry out their obligations hereunder in accordance with generally accepted professional standards and practices, and shall observe sound management practices, and employ appropriate technology and safe and effective equipment, machinery, materials and methods. The Consultant shall always act, in respect of any matter relating to this Contract or to the Services, as faithful adviser to the Client, and shall at all times support and safeguard the Client's legitimate interests in any dealings with Sub-Consultants or third parties.

**3.1.2 Law Governing Services** The Consultant shall perform the Services in accordance with the Applicable Law and shall take all practicable steps to ensure that any Sub-Consultants, as well as the Personnel of the Consultant and any Sub-Consultants, comply with the Applicable Law. The Client shall notify the Consultant in writing of relevant local customs, and the Consultant shall, after such notification, respect such customs.

#### 3.2 Conflict of Interest

**3.2.1 Consultant Not to Benefit from Discounts** (a) The payment to the Consultant pursuant to Clause GC 6 hereof shall constitute the Consultant's payment in connection with this Contract and, subject to Clause GC 3.2.2 hereof, the Consultant shall not accept for its own benefit any discount or similar payment in connection with activities pursuant to this Contract or in the discharge of its obligations hereunder, and the Consultant shall use its best efforts to ensure that any Sub-Consultants, as well as the Personnel and agents of either of them, similarly shall not receive any such additional payment.

(b) deleted

**3.2.2 Consultant, and Sub-Consultants Not to** The Consultant agrees that, during the term of this Contract and after its termination, the Consultant as well as any Sub-Consultant, shall be disqualified from providing goods, works or



**Engage in  
Certain  
Activities**

services (other than consulting services) for any project resulting from the Services.

**3.2.3 Prohibition of  
Conflicting  
Activities**

The Consultant shall not engage, and shall cause their Personnel as well as their Sub-Consultants and their Personnel not to engage, either directly or indirectly, in any, personal, business or professional activities that would represent a conflict with the activities assigned to them under this Contract.

**3.3 Confidentiality**

Except with the prior written consent of the Client, neither the Consultant, the Sub-Consultant nor their Personnel shall at any time communicate to any person or entity any confidential information acquired in the course of the Services, nor shall the Consultant, the Sub-Consultant or their Personnel make public the recommendations formulated in the course of, or as a result of, the Services.

**3.4 Liability of the  
Consultant**

- (a) Subject to Clause GC 5.2, the Consultant shall be responsible for, and shall indemnify the Client, in respect of loss of or damage to equipment and materials furnished by the Client, or purchased by the Consultant in whole or in part with funds provided by the Client.
- (b) The Consultant undertakes full responsibility in respect of life, health, and accidents for the Personnel and for the dependents of any such Personnel.
- (c) The Consultant shall indemnify the Client from and against any and all claims, liabilities, obligations, losses, damages, penalties, actions, judgment, suits, proceedings, demands, costs, expenses and disbursements of whatsoever nature that may be imposed on, incurred by or asserted against the Client during or in connection in the Services by reason of: (i) infringement or alleged infringement by the Consultant of any patent or other protected right; or (ii) plagiarism or alleged plagiarism by the Consultant.
- (d) The Consultant shall ensure that all goods and services (including without limitation all computer hardware, software and systems) procured by the Consultant out of funds provided or reimbursed by the Client or used by the Consultant in the carrying out of the Services do not violate or infringe any industrial property or intellectual property right or claim of any Third Party.



- (e) Subject to Clause GC 5.2, the Consultant shall indemnify, protect and defend at their own expense the Client, and its agents and employees from and against any and all actions, claims, losses or damages arising out of Consultant's failure to exercise the skill and care required under Clause GC 3.1.1 provided, however:
  - (i) that the Consultant is notified of such actions, claims, losses or damages not later than the number of months after conclusion of the Services indicated in the SC;
  - (ii) that the ceiling on Consultant's liability shall be limited to the amount indicated in the SC, except that such ceiling shall not apply to actions, claims, losses or damages caused by Consultant's gross negligence or reckless conduct;
  - (iii) that Consultant's liability under Clause GC 3.1.1 shall be limited to actions, claims, losses or damages directly caused by such failure to exercise the said skill and care, and shall not include liability for any actions, claims, losses or damages arising out of occurrences incidental or indirectly consequential to such failure.
- (f) In addition to any liability the Consultant may have under Clause GC 3.1.1, the Consultant shall, at its own cost and expense, upon request of Client, re-perform the Services in the event of Consultant's failure to exercise the skill and care required under Clause GC 3.1.1.
- (g) Notwithstanding the provisions of paragraph (a) of this Clause 3.4, the Consultant shall have no liability whatsoever for actions, claims, losses or damages occasioned by: (i) Client's overriding a decision or recommendation of Consultant or requiring Consultant to implement a decision or recommendation with which Consultant does not agree; or (ii) the improper execution of Consultant's instructions by agents, employees or independent Contractors of the Client.

**3.5 Insurance to be Taken Out by the Consultant**

The Consultant (i) shall take out and maintain, and shall cause any Sub-Consultants to take out and maintain, at their (or the Sub-Consultants', as the case may be) own cost but on terms and conditions approved by the Client, insurance against the risks, and for the coverages specified in the SC, and (ii) at the Client's request, shall provide evidence to the Client showing

that such insurance has been taken out and maintained and that the current premiums therefore have been paid.

**3.6 Accounting, Inspection and Auditing**

The Consultant (i) shall keep accurate and systematic accounts and records in respect of the Services hereunder, in accordance with internationally accepted accounting principles and in such form and detail as will clearly identify all relevant time changes and costs, and the bases thereof, and (ii) shall periodically permit the Client or its designated representative, and up to five years from the expiration or termination of this Contract, to inspect the same and make copies thereof as well as to have them audited by auditors appointed by the Client, if so required by the Client as the case may be.

**3.7 Consultant's Actions Requiring Client's Prior Approval**

The Consultant shall obtain the Client's prior approval in writing before taking any of the following actions:

- (a) Any change or addition to the Personnel.
- (b) Subcontracts: the Consultant may subcontract work relating to the Services to an extent and with such experts and entities as may be approved in advance by the Client. Notwithstanding such approval, the Consultant shall retain full responsibility for the Services. In the event that any Sub-Consultants are found by the Client to be incompetent or incapable in discharging assigned duties, the Client may request the Consultant to provide a replacement, with qualifications and experience acceptable to the Client, or to resume the performance of the Services itself.
- (c) Any other action that may be specified in the SC.

**3.8 Reporting**

**3.8.1 Reporting Obligations**

- (a) The Consultant shall submit to the Client the reports and documents specified in TOR, in the form, in the numbers and within the time periods set forth in the said TOR. Final reports shall be delivered in CD ROM in addition to the hard copies specified in said TOR.
- (b) deleted.

**3.8.2 Serious Hindrances**

The Consultant shall report to the Client promptly the occurrence of any event or condition which might delay or prevent completion of any significant part of the project in

accordance with the schedules and to indicate what steps shall be taken to meet the situation.

**3.9 Documents Prepared by the Consultant to be the Property of the Client**

- (a) All plans, drawings, specifications, designs, reports, other documents and software prepared by the Consultant for the Client under this Contract shall become and remain the property of the Client, and the Consultant shall, not later than upon termination or expiration of this Contract, deliver all such documents to the Client, together with a detailed inventory thereof. The Client in its sole discretion may make such documents available to the public.
- (b) The Consultant may retain a copy of such documents and software, and use such software for their own use with prior written approval of the Client. If license agreements are necessary or appropriate between the Consultant and third parties for purposes of development of any such computer programs, the Consultant shall obtain the Client's prior written approval to such agreements, and the Client shall be entitled at its discretion to require recovering the expenses related to the development of the program(s) concerned.

**3.10 Equipment, Vehicles and Materials Furnished by the Client**

Equipment, vehicles and materials made available to the Consultant by the Client, or purchased by the Consultant wholly or partly with funds provided by the Client, shall be the property of the Client and shall be marked accordingly. Upon termination or expiration of this Contract, the Consultant shall make available to the Client an inventory of such equipment, vehicles and materials and shall dispose of such equipment and materials in accordance with the Client's instructions. While in possession of such equipment, vehicles and materials, the Consultant, unless otherwise instructed by the Client in writing, shall insure them at the expense of the Client in an amount equal to their full replacement value.

**3.11 Equipment and Materials Provided by the Consultant**

Equipment or materials brought into the Client's Country by the Consultant and the Personnel and used either for the Project or personal use shall remain the property of the Consultant or the Personnel concerned, as applicable.

**3.12 Specifications and Designs**

- (a) The Consultant shall prepare all specifications and designs that may be required under the Contract using the metric system and so as to embody the latest design criteria and the Consultant shall specify standards that are accepted and well known among industrial nations.

- (b) The consultant shall ensure that the specifications and designs and all documentation relating to the procurement of goods and services provided under the services are prepared on an impartial basis so as to promote international competitive bidding.

#### **4. CONSULTANTS' PERSONNEL AND SUB-CONSULTANTS**

- 4.1 General** The Services shall be carried out by the Personnel specified in the Technical Proposal.
- 4.2 Replacement of Personnel**
- (a) In the event that any of the Personnel is found by the Client to be incompetent, guilty of misbehavior or incapable in discharging the assigned responsibilities, the Client may request the Consultant, at the expense of the Consultant, to forthwith provide a replacement with suitable qualifications and experience acceptable to the Client and the Consultant shall provide such replacement.
  - (b) Should it become necessary for the Consultant to replace any of the Personnel, the Consultant shall forthwith provide a replacement acceptable to the Client with comparable or better qualifications. In the event that the Personnel replaced are, at the time of replacement, in the field, the Consultant shall bear the travel and other related costs arising out of or incidental to the replacement. The rate of remuneration and reimbursable expenses allowable for such replacement shall be the same as agreed between the Client and the Consultant for the Personnel being replaced. For any additional Personnel proposed by the Consultant and approved by the Client, the relevant remuneration rate(s) and estimated reimbursable expenses will be as negotiated between the Client and the Consultant.
- 4.3 Working Hours, Overtime, Leave**
- (a) Working hours and holidays for Personnel are set forth in Appendix C hereto. To account for travel time, International Personnel carrying out Services inside the Client's Country shall be deemed to have commenced, or finished work in respect of the Services such number of days before their arrival in, or after their departure from the Client's Country as is specified in Appendix C hereto.
  - (b) Deleted.
- 4.4 Adjustments to Appendix C – Personnel Schedule** Subject to the prior approval of the Client in accordance with Clause GC 3.7 (a), the Consultant may make adjustment in the periods of time indicated in Appendix C, as may be appropriate to ensure the efficient performance of the Services and provided

that such adjustments will not cause payments made under the Contract to exceed the maximum amount payable as specified in Clause GC 6.1.

**4.5 Resident project Manager** Deleted.

**5. OBLIGATIONS OF THE CLIENT**

- 5.1 Assistance and Exemptions** Unless otherwise specified in the SC, the Client shall use its best efforts to ensure that the Government shall:
- (a) Provide the Consultant, Sub-Consultants and Personnel with work permits and such other documents as shall be necessary to enable the Consultant, Sub-Consultants or Personnel to perform the Services.
  - (b) Arrange for the Personnel and, if appropriate, their eligible dependents to be provided promptly with all necessary entry and exit visas, residence permits, exchange permits and any other documents required for their stay in the Client's Country.
  - (c) Facilitate prompt clearance through customs of any property required for the Services and of the personal effects of the Personnel and their eligible dependents.
  - (d) Issue to officials, agents and representatives of the Government all such instructions as may be necessary or appropriate for the prompt and effective implementation of the Services.
  - (e) Exempt the Consultant and the Personnel and any Sub-Consultants employed by the Consultant for the Services from any requirement to register or obtain any permit to practice their profession or to establish themselves either individually or as a corporate entity according to the Applicable Law.
  - (f) Grant to the Consultant, any Sub-Consultants and the Personnel of either of them the privilege, pursuant to the Applicable Law, of bringing into the Client's Country reasonable amounts of foreign currency for the purposes of the Services or for the personal use of the Personnel and their dependents and of withdrawing any such amounts as may be earned therein by the Personnel in the execution of the Services.

- (g) Provide to the Consultant, sub consultants and personnel any such other assistance as may be specified in the SC.

- 5.2 Access to Land** The Client warrants that the Consultant shall have, free of charge, unimpeded access to all land in the Client's Country in respect of which access is required for the performance of the Services. The Client will be responsible for any damage to such land or any property thereon resulting from such access and will indemnify the Consultant and each of the Personnel in respect of liability for any such damage, unless such damage is caused by the default or negligence of the Consultant or any Sub-Consultants or the Personnel of either of them.
- 5.3 Change in the Applicable Law Related to Taxes and Duties** If, after the date of this Contract, there is any change in the Applicable Law with respect to taxes and duties which increases or decreases the cost incurred by the Consultant in performing the Services, then the remuneration and reimbursable expenses otherwise payable to the Consultant under this Contract shall be increased or decreased accordingly by agreement between the Parties hereto.
- 5.4** (a) Deleted.  
(b) Deleted.
- 5.5 Payment** In consideration of the Services performed by the Consultant under this Contract, the Client shall make to the Consultant such payments and in such manner as is provided by Clause GC 6 of this Contract.
- 5.6 Counterpart personal** Deleted.
- 5.7 Difference of opinion** In the case difference of opinion between the Client and the Consultant on any important matters involving professional judgement that might affect the proper evaluation or execution of the Project, the Client shall allow the Consultant to submit promptly to the Client a written report and simultaneously, to submit a copy to RDSO. The Client shall forward the report to RDSO with its comments in time to allow RDSO to study it and communicate with the Client before any irreversible steps are taken in the matter. In cases of urgency, the Consultant has the right to request the Client and/or RDSO that the matter be discussed immediately between the Client and RDSO.

## 6. PAYMENTS TO THE CONSULTANT

- 6.1** Deleted.
- 6.2** Deleted
- 6.3 Currency of Payment** Foreign currency payments shall be made in the currency or currencies specified in the SC, and local currency payments shall be made in the currency of the Client's Country.
- 6.4 Mode of Billing and Payment** Billings and payments in respect of the Services shall be made as follows:
- (a) Within the number of days after the Effective Date specified in the SC, the Client shall cause to be paid to the Consultant advance payments in foreign currency and in local currency as specified in the SC. When the SC indicate advance payment, this will be due after provision by the Consultant to the Client of an advance payment security acceptable to the Client in an amount (or amounts) and in a currency (or currencies) specified in the SC. Such security (i) to remain effective until the advance payment has been fully set off, and (ii) to be in the form set forth in Appendix H hereto, or in such other form as the Client shall have approved in writing. The advance payments will be set off by the Client in equal installments against the statements for the number of months of the Services specified in the SC until said advance payments have been fully set off.
  - (b) As soon as practicable and not later than fifteen (15) days after the end of each calendar month during the period of the Services, or after the end of each time intervals otherwise indicated in the SC, the Consultant shall submit to the Client, in duplicate, itemized statements, accompanied by copies of invoices, vouchers and other appropriate supporting materials, of the amounts payable pursuant to Clauses GC 6.3 and GC 6.4 for such month, or any other period indicated in the SC. Separate statements shall be submitted in respect of amounts payable in foreign currency and in local currency.
  - (c) The Client shall pay the Consultant's statements within sixty (60) days after the receipt by the Client of such statements with supporting documents. Only such portion of a statement that is not satisfactorily supported may be withheld from payment. Should any discrepancy be found to exist between actual payment and costs authorized to be incurred by the Consultant, the Client may add or subtract the difference from any subsequent payments. Interest at the annual rate specified in the SC shall



become payable as from the above due date on any amount due by, but not paid on, such due date.

- (d) The final payment under this Clause shall be made only after the final report and a final statement, identified as such, shall have been submitted by the Consultant and approved as satisfactory by the Client. The Services shall be deemed completed and finally accepted by the Client and the final report and final statement shall be deemed approved by the Client as satisfactory ninety (90) calendar days after receipt of the final report and final statement by the Client unless the Client, within such ninety (90) day period, gives written notice to the Consultant specifying in detail deficiencies in the Services, the final report or final statement. The Consultant shall thereupon promptly make any necessary corrections, and thereafter the foregoing process shall be repeated. Any amount, which the Client has paid or caused to be paid in accordance with this Clause in excess of the amounts actually payable in accordance with the provisions of this Contract, shall be reimbursed by the Consultant to the Client within thirty (30) days after receipt by the Consultant of notice thereof. Any such claim by the Client for reimbursement must be made within twelve (12) calendar months after receipt by the Client of a final report and a final statement approved by the Client in accordance with the above.
- (e) All payments under this Contract shall be made to the accounts of the Consultant specified in the SC.
- (f) Deleted.
- (g) With the exception of the final payment under (d) above, payments do not constitute acceptance of the Services nor relieve the Consultant of any obligations hereunder.

## **7. FAIRNESS AND GOOD FAITH**

### **7.1 Good Faith**

The Parties undertake to act in good faith with respect to each other's rights under this Contract and to adopt all reasonable measures to ensure the realization of the objectives of this Contract.

### **7.2 Operation of the Contract**

The Parties recognize that it is impractical in this Contract to provide for every contingency which may arise during the life of the Contract, and the Parties hereby agree that it is their intention that this Contract shall operate fairly as between them, and without detriment to the interest of either of them, and that, if during the term of this Contract either Party believes that this



Contract is operating unfairly, the Parties will use their best efforts to agree on such action as may be necessary to remove the cause or causes of such unfairness, but no failure to agree on any action pursuant to this Clause shall give rise to a dispute subject to arbitration in accordance with Clause GC 8 hereof.

## **8. SETTLEMENT OF DISPUTES**

### **8.1 Amicable Settlement**

If either Party objects to any action or inaction of the other Party, the objecting Party may file a written Notice of Dispute to the other Party providing in detail the basis of the dispute. The Party receiving the Notice of Dispute will consider it and respond in writing within 14 days after receipt. If that Party fails to respond within 14 days, or the dispute cannot be amicably settled within 14 days following the response of that Party, Clause GC 8.2 shall apply.

### **8.2 Dispute Resolution**

Any dispute between the Parties as to matters arising pursuant to this Contract that cannot be settled amicably according to Clause GC 8.1 may be submitted by either Party for settlement in accordance with the provisions specified in the SC.

### III. Special Conditions of Contract

| Number of GC Clause | Amendments of, and Supplements to, Clauses in the General Conditions of Contract   |
|---------------------|--|
| 1.1(a)              | The words “in the Client’s Country” are amended to read “in India.”  |
| 1.1 (b) (d) (k) (q) | Please refer to related definitions for the words “Client”, “Consultant”, “Joint Venture/Consortium”, and “Services” in the section “Instructions to Tenderer(ITT)”.   |
| 1.4                 | The Contract has been executed in: <b>English</b><br>Reports and correspondence shall be in: <b>English</b>  |
| 1.6                 | <p>The addresses are:</p> <p>Client</p> <p style="padding-left: 40px;"><b>Address</b> Group General Manager/ S&amp;T/WC-I<br/>Room no 424, DFCCIL Office,<br/>4<sup>th</sup> Floor, Pragati Maidan Metro Station<br/>Building Complex,<br/>New Delhi – 110001, India</p> <p style="padding-left: 40px;"><b>Attention</b> K Madhusudan<br/><b>Facsimile</b> +91-11-23454762<br/><b>Email</b> <a href="mailto:kmadhusudan@dfcc.co.in">kmadhusudan@dfcc.co.in</a></p> <p>Consultant :</p> <p style="padding-left: 40px;"><b>Address</b></p> <p style="padding-left: 40px;"><b>Attention</b><br/><b>Facsimile</b><br/><b>Email</b></p> |
| 1.8                 | <p>The Lead Partner is <i>[insert name of partner]</i></p> <p><b>Note:</b> <i>If the Consultant consists of a Joint Venture/Consortium the name of the entity whose address is specified in Clause SC 1.6 should be inserted here. If the Consultant consists only of one entity, this Clause SC 1.8 should be deleted from the SC.</i></p>  |
| 1.9                 | <p>The Authorized Representatives is/are:</p> <p style="padding-left: 40px;"><b>Client</b> Group General Manager/S&amp;T/WC-I</p>  |

|             |  |
|-------------|--|
|             | <p style="text-align: center;"><b>Consultant</b></p> <p>The Client may amend the authorized representative which shall be advised in writing from time to time.</p>  |
| <b>1.10</b> | <p>The sub clause may be supplemented with the following:</p> <p>The Consultants, Sub Consultants and the Personnel shall pay the corporate income tax and personal income tax payable by them under the Contract and applicable laws.</p> <p>The Employer;</p> <p>a) shall effect Tax deduction at source (TDS) as per the applicable rates in respect of payments made to the Consultants;</p> <p>b) shall arrange to deposit the above TDS with the Govt/Tax Authorities within the time stipulated under the relevant Act. Certificates evidencing such deposits shall be forwarded by the Employer to the Consultants;</p> <p>c) shall pay to the Consultants Services Taxes payable as per applicable valuation rules as are determined by service tax authorities from time to time The Employer shall compensate the Consultants for any further service tax payable occasioned due to subsequent changes in valuation rules if any;</p> <p>d) shall reimburse to the Consultants any additional taxes that may become payable due to change in applicable law or that may get enacted during the tenure of the Contract from the date such taxes become payable. Such payments shall be made by the Consultants within the time specified in the law and reimbursed on satisfactory production of the evidence thereof to the Employer.</p> |
| <b>1.11</b> | <p>Add the following at the end of the para.</p> <p>After issue of Letter of Acceptance (LOA) to the successful bidder, he and the Client shall sign a Integrity pact contract as per proforma in Annexure G. This shall be prior to signing of the Contract agreement for this work and after submission of Performance guarantee as per SC3.13.</p>  |
| <b>2.1</b>  | <p>Add the following text to the beginning of the sub clause</p> <p>The Contract shall be effective from the date of issue of LOA.</p>   |
| <b>2.2</b>  | <p>The time period shall be 1 (one) month or such other time as the parties may agree in writing.</p>  |

|                  |   |
|------------------|---|
| 2.3              | The time period shall be from the date of issue of LOA.   |
| 2.4              | The estimated total duration of the ISA contract as per key dates (Section 8) shall be FOUR YEARS from date of issue of LOA. However the time line finalized keeping the key dates for various activities as finally agreed by the client as per TOR para 17 shall also be binding. No price escalation/ upward revision of prices will be allowed if the contract period is extended due to any reason.  |
| 2.6              | <p>Add the following text at the end of clause 2.6.</p> <p>The Client shall have the right to exercise following pricing mechanism for any additional Safety Assessment work for the same section within the original /extended completion period.</p> <ol style="list-style-type: none"> <li>The Consultant shall be asked to submit the price for the additional work.</li> <li>The minimum number of man days for the additional work proposed by the contractor shall be actual work effort and proportional to the minimum man days originally quoted and agreed for similar activities.</li> <li>The man day rate shall be same as per contract agreement for similar activity.</li> <li>Professional Indemnity Insurance shall be extended by the finally agreed cost of the additional work within 2 months of issue of the letter for the additional work.</li> </ol>  |
| 2.10 ( new para) | <p>Add New para 2.10</p> <p><b>2.10 Deficiency of Services.</b></p> <p>2.10.1 Deficiencies in the services on part of the ISA may attract Liquidated Damages, up to a maximum cumulative amount of 2.5% of contract price and/or debarment etc., by the client. For every week of delay attributable to the deficiency in service by ISA as per SC 2.10.3, Liquidated Damages @ 0.05% of the Contract Price, shall be imposed on the ISA.</p> <p>2.10.2 Signalling System and Generic Product of the Contract shall be considered separately for imposition of LD as per Clause above. For this purpose, Contract Price shall mean price of the concerned part of the Contract i.e. of either Signalling System or Generic Product.</p> <p>2.10.3 The following shall constitute <b>deficiency in service</b> but the list is not exhaustive:</p> <ol style="list-style-type: none"> <li>Failure to give proper and timely advice to client/contractor to enable correction during execution</li> </ol> |

|                          |  |
|--------------------------|--|
|                          | <p>(b) Delay in design review and withholding approvals etc.</p> <p>(c) Refusing to give reasons for decisions when called for by the client</p> <p>(d) Frequent replacement of Personnel/ Professionals.</p> <p>(e) non-deployment or delayed deployment of personnel by ISA with respect to time lines, Milestones or Coordinating events as agreed by the Client.</p> <p>(f) Lack of proper coordination with contractors and DFCCIL/MOR officials in Headquarters as well as in field thus hampering smooth implementation of project.</p>   |
| <b>3.1.2</b>             | <p>Add at the end of the para</p> <p>“The contractor for this work shall be responsible for ensuring compliance to the Applicable law and other Laws that are relevant to the contract including direct and Indirect taxation laws”</p>  |
| <b>3.2.4 ( New para)</b> | <p>Add New para 3.2.4.</p> <p>3.2.4 (a) Conflict between ISA activities and of the procurement of goods or consulting/non-consulting services: The bidder that has been engaged to provide goods or consulting/non-consulting services for a project, or any of its affiliates, shall be disqualified from providing ISA services resulting from or directly related to those goods or consulting/non-consulting services.</p> <p>3.2.4 (b) Conflict among consulting assignments: Neither a tenderer nor any of its affiliates shall be hired for any assignment that, by its nature, may be in conflict with another assignment of the tenderer. The tenderer ( firm or firms individually in case of a JV/consortium) or any of its affiliates should not have been involved in the other project related activities like general consultancy, tendering, design, testing for the project as defined in the data sheet.</p> |
| <b>3.4 (e) (i)</b>       | The number of months shall be 12 (TWELVE) months.  |
| <b>3.4 (e) (ii)</b>      | <p><b>Replace the sub Clause as under;</b></p> <p><b>Limitation of the Consultants’ Liability towards the Employer</b></p> <p>(a) Except in case of gross negligence or willful misconduct on the part of the Consultants or on the part of any person or firm acting on behalf of the Consultants in carrying out the Services, the Consultants, with respect to damage caused by the Consultants to the Employer’s property, shall not be liable to the Employer:</p> <p>(i) for any indirect or consequential loss or damage; and</p> <p>(ii) for any direct loss or damage that exceeds (A) the total payments for professional fees and reimbursable expenditures made or expected to be made to the Consultants hereunder, or</p>  |

|              |  |
|--------------|--|
|              | <p>(B) the proceeds the Consultants may be entitled to receive from any insurance maintained by the Consultants to cover such a liability, whichever of (A) or (B) is higher.</p> <p>This limitation of liability shall not affect the Consultants' liability, if any, for damage to Third Parties caused by the Consultants or any person or firm acting on behalf of the Consultants in carrying out the Services."</p>  |
| <b>3.5</b>   | <p>In the fifth line Delete the text beginning with " (ii) at the client's request..." and ending with " ...have been paid"</p> <p>The GC Sub Clause shall be supplemented with the following;<br/>The risks and the coverage shall be as follows:</p> <ol style="list-style-type: none"> <li>1. Professional Liability insurance, not less than the value of the Contract either in foreign currencies same as mentioned in LOA (as required under Clause SC 3.4(e) (ii)) or its equivalent in INR with exchange rate taken as RBI Reference rates corresponding to the Working day 28 Days prior to Proposal submission deadline</li> <li>2. Relevant Insurance Policies shall be submitted with Employer within 90 days of Contract being effective in terms of GC 2.1</li> <li>3. The Policy shall be from an Insurance company operating in India.</li> <li>4. The Insurance shall not be cancelled midterm without the prior consent of the Client. Such clause shall be incorporated in the Insurance.</li> <li>5. The Insurance shall be kept valid upto three months after issue of Completion certificate.</li> <li>6. Client (DFCCIL) shall be the beneficiary of the Insurance.</li> <li>7. All insurances to be valid for 3 months beyond the date of completion of the services and any extensions shall be submitted timely.</li> </ol> |
| <b>3.8.1</b> | <p>Add New para 3.8.1 (b)</p> <p>3.8.1 (b) The ISA shall ensure that the currency of accreditation as per ISO/IE 17065 is valid on the date of assignment ( Effective date) as well as on the date of ISA's final report after completion of assignment.</p>   |
| <b>3.9</b>   | <p>Add New para 3.9(c)</p> <p>All reports and the certification of the Signalling system and of the Signalling Products shall remain the property of the Client and the Client reserves the right to use the certification of ISA for any other purpose on DFCCIL/IR.</p>  |

|                                |  |
|--------------------------------|--|
| <b>3.13 (Add a New Clause)</b> | <p><b>Performance Guarantee</b></p> <p>The successful bidder shall submit a Performance Guarantee within 28 days in the form of Bank Guarantee for an amount equivalent to 10% of the contract value in equivalent currencies as mentioned in LOA. The Performance Guarantee shall be in the form of irrevocable Bank Guarantee from an Indian scheduled commercial bank listed in Schedule II of the Reserve bank of India Act 1934. Extension of time for submission of Performance Guarantee beyond 28 days upto 60 days from the date of signing of Letter of Acceptance by the authority competent to sign the Contract Agreement. However a penal interest of 15% per annum shall be levied for delay beyond 28 days from the date of issue of Letter of Acceptance. In case the successful bidder fails to submit the requisite Performance guarantee even after 60 days from the date of issue of LOA, the contract shall be terminated duly forfeiting Earnest money and other dues, payable if any against that contract. The failed contractor shall be debarred from participating in the retender for that work.</p> <p>The prescribed form for Bank Guarantee is provided in Appendix K. Performance Guarantee would be valid for 12 months beyond the date of completion of the services. Non Performance of contract by Consultant or violation of any clause of Integrity Pact shall attract forfeiture of Performance security.</p> <p>Performance Guarantee shall be released on issue of Completion Certificate by Client. In case of extension of the Completion period of the ISA contract, validity of the Performance Guarantee shall be extended timely, failing which the Client shall initiate steps to encash the Guarantee.</p> |
| <b>3.14( Add a New Clause)</b> | <p>Security of site and works shall not be the responsibility of the ISA. However he shall be responsible for any equipment/accessories brought to the location as part of the services.</p>   |
| <b>4.2</b>                     | <p><b>Delete GCC Clause 4.2 and substitute with the following:</b></p> <p><b>4.2 Change of Personnel</b></p> <p>4.2.1 Normally no changes shall be made in the team associated with the project. If, for any reason beyond the reasonable control of the contractor (e.g. death or physical disability), it becomes necessary to replace any of the Personnel, the contractor shall forthwith provide a person with Qualifications meeting the Qualification Criteria as per TOR 16.3 with the prior approval of client.</p> <p>4.2.2 If the Employer</p> <ul style="list-style-type: none"> <li>(i) finds that any of the Personnel has committed serious misconduct or has been charged with having committed a criminal action, or</li> <li>(ii) has reasonable cause to be dissatisfied with the performance of any of the Personnel, then the Client shall, at the Employer's written</li> </ul>  |

|               |  |
|---------------|--|
|               | <p>request specifying the grounds thereof, forthwith provide as replacement a person with qualifications and experience acceptable to the client.</p> <p>4.2.3 If it becomes necessary to replace any of the Personnel for reasons other than those under 4.2.1 and 4.2.2 above, the contractor shall forthwith provide a person with qualifications meeting the eligibility as per TOR with the prior approval of client.</p>   |
| <b>4.3</b>    | <p><b>Clause 4.3 is deleted.</b></p> <p><b>Insert a new clause 4.3 as given below:</b></p> <p>4.3 In case, the Client requires consultant personnel to be deputed outside the Jurisdiction of Client Services (as defined in TOR) for any work related to the tender, such personnel will be entitled for reimbursement of expenses. However, personal approval of an officer not below the rank of, CPM/GM of DFCCIL, will be required for this reimbursement. The Consultant shall submit per-diem rate of reimbursement separately for different categories of cities and personnel with their proposal as and when required.</p> |
| <b>4.4</b>    | Deleted.   |
| <b>5.1</b>    | Sub Clause (c) deleted.  |
| <b>5.2</b>    | The "land" in line 2 may be replaced with "land/identified sites".   |
| <b>6.1</b>    | Clause 6.1 deleted.  |
| <b>6.2</b>    | Clause 6.2 deleted.  |
| <b>6.3</b>    | <p>The foreign currency shall be the following:</p> <p>(i) Any other Internationally traded currencies.<br/>(please refer Data Sheet Para 11.1 (i))</p>  |
| <b>6.4(a)</b> | No Advance Payment is admissible.  |
| <b>6.4(b)</b> | The 'time intervals' and the 'period' mentioned in GCC shall mean the Schedule of payments as detailed in statement FIN 2.   |



|               |  |
|---------------|--|
| <b>6.4(c)</b> | <p>The interest rate is: 5% (Five Percent) per annum (simple interest).</p> <p>The payments shall be made after statutory deductions and LD (specified in SC 2.10) if any.</p>   |
| <b>6.4(d)</b> | <p>The final report shall include documents to prove that the accreditation of the consultant as per ISO/IEC 17065 is valid. The payments shall be made after statutory deductions and LD (specified in SC 2.10) if any.</p>   |
| <b>6.4(e)</b> | <p>The accounts are:</p> <p>for foreign currency:[<i>insert account</i>].</p> <p>for local currency: [<i>insert account</i>].</p>  |
| <b>8.2</b>    | <p>Disputes shall be settled by arbitration in accordance with the following provisions:</p> <p>If the dispute or disagreement cannot be settled amicably pursuant to clause GCC 8.1, such dispute or disagreement shall be finally settled under the Rules of Arbitration of the International Chamber of Commerce – Delhi Seat (“ICC Rules of Arbitration”) by Arbitrators appointed in accordance with said Rules. Matters to be arbitrated upon shall be referred to a sole Arbitrator where the total value of the dispute does not exceed Rs 15 million. For disputes where the total value of the arbitration exceeds Rs 15 million, there shall be a panel of Arbitrators (three).</p> <p>Arbitration proceedings shall be held in New Delhi, India. English language shall be the official language for all purposes.</p> |
| <b>9.0</b>    | <p><b>Add New para 9.0</b></p> <p>9.0 The documents forming the contract are to be taken as mutually explanatory of one another. For the purpose of Interpretation, the priority of the documents shall be in accordance with the following sequence:</p> <ul style="list-style-type: none"> <li>(a) The Contract agreement</li> <li>(b) The letter of acceptance.</li> <li>(c) Pre and Post bid proceeds.</li> <li>(d) Letter of Invitation</li> <li>(e) Schedule of payments</li> <li>(f) ITT</li> <li>(g) TOR</li> <li>(h) Special conditions of contract.</li> <li>(i) General Conditions of contract</li> <li>(j) The contractor’s proposal.</li> <li>(k) Any other document forming part of contract.</li> </ul>   |

## **Section 7**

### **Appendices for Guidance**

## Appendix A

### Form Joint Venture / Consortium Agreement

The Partners of the Joint Venture / Consortium shall provide Joint Venture / Consortium Agreement for Joint Venture/Consortium Participation which includes at least the followings:-

M/s \_\_\_\_\_ having its registered office at \_\_\_\_\_ (hereinafter referred to as) is the Lead Partner of the Joint Venture / Consortium and acting as the authorized representative of the Joint Venture / Consortium on first part; and

M/s \_\_\_\_\_ having its registered office at \_\_\_\_\_ (hereinafter referred to as ' \_\_\_\_\_ ') in the capacity of a Joint Partner of the Joint Venture / Consortium on the other part; and

M/s \_\_\_\_\_ having its registered office at \_\_\_\_\_ (hereinafter referred to as ' \_\_\_\_\_ ') in the capacity of a Joint Partner of the Joint Venture / Consortium on the other part.

The expressions of \_\_\_\_\_ and \_\_\_\_\_ shall wherever the context admits, mean and include their respective legal representatives, successor interest and assigns and shall collectively be referred to as "the Parties" and individually as "the Party"

WHEREAS:

Dedicated Freight Corridor Corporation of India Limited (DFCCIL) [hereinafter referred to as "Employer"] has invited bids for \_\_\_\_\_ "[Insert name of work]"

NOW, THEREFORE, THE PARTIES AGREE AS FOLLOWS:

1. The following documents shall be deemed to form and be read and construed as an integral part of this JV / Consortium Agreement.
  - i. Letter of Invitation;
  - ii. RFP/ Bid Documents issued by the Employer
  - iii. Any Addendum/Corrigendum to the Bidding Documents issued by the Employer
  - iv. The Bid submitted on our behalf jointly by the Authorised Signatory from the Lead Partner.
2. The 'Parties' have studied the Bid Documents and have agreed to participate in submitting a 'Bid' jointly.
3. Mr./Ms. \_\_\_\_\_, Authorised Signatory of the Lead Partner and whose details are provided as under, shall be the Authorized Representative of the Joint Venture (JV) / Consortium for all intents and purpose. He / She shall have the authority to conduct all business for and on behalf of any and all the Partners of JV/Consortium during the bidding process and in the event the JV / Consortium is awarded the Contract, during Contract execution.

|       |              |          |            |           |
|-------|--------------|----------|------------|-----------|
| Name, | Designation, | Address, | Tel/Fax no | E Mail ID |
|-------|--------------|----------|------------|-----------|

4. We undertake that

- a) the Lead Partner of our JV/Consortium -----(Name of the Lead Partner) shall have the maximum financial stake amongst the other partners of the JV/Consortium.
- b) The Lead partner is on the RDSO panel of ISA for Main line Signalling Projects/systems as well as for Generic products used in Railway Signalling as on the date of submission of the bid.
- c) The non Lead partners are borne on the RDSO panel of ISA for Main line Signalling Projects/systems OR for Generic products used in Railway Signalling as on the date of submission of the bid.
- d) The distribution of responsibilities in execution of Work and the percentage participation amongst various Partners of the JV / Consortium for the subject work shall be as under (assessment and certification for the project or for generic product shall be carried out only by the firm authorised by RDSO as per the panel of ISA).

| Sl. No. | Name of the Partner | Role (Lead Partner/ Partner) | Distribution of Responsibilities in execution of the Work | % Participation |
|---------|---------------------|------------------------------|---|-----------------|
|         |                     |                              |   |                 |
|         |                     |                              |   |                 |
|         |                     |                              |   |                 |

#### 5. JOINT AND SEVERAL RESPONSIBILITY

The Parties undertake that they shall be jointly and severally liable to the Employer in the discharge of all the obligations and liabilities as per the contract with the Employer and for the performance of contract awarded to their JV / Consortium.

In case one Party fails or delays to perform its obligations either partially or totally, it shall be responsible for all the out comings concerned, and upon such conditions the other Parties shall be obliged to take measures to perform well all the obligations under the contract with the Employer.

#### 6. ASSIGNMENT AND THIRD PARTIES

The Parties shall cooperate throughout the entire period of this Joint Venture/Consortium Agreement on the basis of exclusivity and neither of the Parties shall make arrangement or enter into agreement either directly or indirectly with any other party or group of parties on matters relating to the Work except with prior written consent of the other Party.

#### 7. EXECUTIVE AUTHORITY

The said Joint Venture / Consortium through its Authorized Representative (as specified above) shall receive instructions, incur liabilities and receive payments from employer. The management structure for the Work shall be prepared by mutual consultations to enable completion of the Work to quality requirements within permitted cost and time.

#### 8. GUARANTEES

Till the award of the work, all the Bank Guarantees to the Employer shall be furnished in the name of JV / Consortium or by the Lead Partner on behalf of the Joint Venture/Consortium which shall be legally binding on all the Partners of the Joint Venture / Consortium.

#### 9. DOCUMENTS & CONFIDENTIALITY

Each Party shall maintain in confidence and not use for any purpose other than those related to the Project all commercial and technical information received or generated in the course of preparation and submission of the Bid.

#### 10. ARBITRATION

Any dispute, controversy or claim arising out of or relating to this agreement shall be settled in the first instance amicably between the Parties. If an amicable settlement cannot be reached as above, it will be settled by ----- [Bidder to specify]

## 11. VALIDITY

This Agreement shall remain in force till the occurrence of the earliest to occur of the following, unless by mutual consent, the Parties agree in writing to extend the validity for a further period.

- a) The bid submitted by the Joint Venture / Consortium is declared unsuccessful, or
- b) Cancellation/ shelving of the Project by the Employer for any reasons prior to award of Work.
- c) Execution of detailed JV/Consortium agreement by the Parties, setting out detailed terms after award of work by the Employer, substantially covering the requirements as mentioned in Bid Documents.

12. This Joint Venture/Consortium Agreement shall be construed under the laws of India.

## 13. NOTICES

The names, addresses and fax numbers of Authorized Signatory of the other Partners of the Joint Venture / Consortium to which notices may be given in writing by FAX confirmed by registered mail or commercial courier shall be as under:

- a) \_\_\_\_\_[Name], \_\_\_\_\_[Designation] \_\_\_\_\_[Address] \_\_\_\_\_[Ph. No., FAX No., E-mail ID]
- b) \_\_\_\_\_[Name], \_\_\_\_\_[Designation] \_\_\_\_\_[Address] \_\_\_\_\_[Ph. No., FAX No., E-mail ID]
- c) \_\_\_\_\_[Name], \_\_\_\_\_[Designation] \_\_\_\_\_[Address] \_\_\_\_\_[Ph. No., FAX No., E-mail ID]

14. Any Other Clause, the Bidder wish to include

*(For Bidders in India to be executed on non-judicial Stamp paper of appropriate value. For Bidders from outside India, to be executed according to the applicable laws in the Bidder's country and by taking into account the Notes shown below.)*

### Notes:

1. *In case of existing joint venture/Consortium, the certified copy of JV / Consortium Agreement may be furnished.*
2. *The mode of execution should be in accordance with the procedure, if any, laid down by the applicable law in the bidder's country and the charter documents of the executants(s) and when it is so required, the same should be under common seal affixed in accordance with the required procedure.*
3. *Whenever required, the Bidder should submit for verification the extract of the charter documents and the shareholder resolution in favour of the person executing this document on behalf of the bidder.*
4. *For a required document executed and issued overseas, the document will also have to be legalised by the Indian Embassy in the Bidder's country and notarized in the jurisdiction where it is being issued. However, documents provided by Bidders from countries that have signed the Hague Legislation Convention 1961 are not required to be legalized by the Indian Embassy, if they carry a conforming Apostille certificate.*

## **Appendix B**

**Not used.**

## Appendix C

### Proforma Letter of Participation from Each Member of Joint Venture (JV/Consortium)

**(For Bidders in India to be executed on non-judicial Stamp paper of appropriate value. For Bidders from outside India, submission of this form is not mandatory. If an equivalent form is submitted by Bidders from outside India, it is to be executed according to the applicable law in the Bidder's country and by taking into account the Notes shown below.)**

No. \_\_\_\_\_ Date \_\_\_\_\_

From: \_\_\_\_\_

To:

Dedicated Freight Corridor of India Ltd. (DFCCIL)  
5<sup>th</sup> Floor, Pragati Maidan Metro Station Building  
New Delhi – 110 001

Re: \_\_\_\_\_ "[Insert name of work]"

Ref: Your notice for Letter of invitation for Bid \_\_\_\_\_

1. We wish to confirm that our company/firm (delete as appropriate) has formed a (JV)/Consortium for the purposes associated with LOI referred to above.
2. We here by authorise Mr----- the authorised signatory of the lead partner with maximum financial stake) who shall act as authorized representative of the (JV)/Consortium for all intents and purpose. He / She shall have the authority to conduct all business for and on behalf of any and all the partners of JV/ consortium.
3. In the event of our group being awarded the contract, we agree to be jointly with \_\_\_\_\_ (names of other members of our (JV)/Consortium) and severally liable to the Dedicated Freight Corridor Corporation of India Limited, its successors and assigns for all obligations, duties and responsibilities arising from or imposed by the contract subsequently entered into between Dedicated Freight Corridor Corporation of India Limited and our JV/Consortium.
4. \*I/We, further agree that entire execution of the contract shall be carried out exclusively through the authorized representative.

Yours faithfully,

(Signature)

(Name of Signatory) \_\_\_\_\_

(Capacity of Signatory) \_\_\_\_\_

Seal

\* Delete as applicable

#### Notes:

1. *In case of existing joint venture/Consortium, the certified copy of (JV)/Consortium Agreement may be furnished.*
2. The mode of execution should be in accordance with the procedure, if any, laid down by the applicable law in the bidder's country and the charter documents of the executants(s) and when it is so required, the same should be under common seal affixed in accordance with the required procedure.
3. Whenever required, the Bidder should submit for verification the extract of the charter documents and the shareholder resolution in favour of the person executing this document on behalf of the bidder.

*For a required document executed and issued overseas, the document will also have to be legalised by the Indian Embassy in the Bidder's country and notarized in the jurisdiction where it is being issued. However, documents provided by Bidders from countries that have signed the Hague Legislation Convention 1961 are not required to be legalized by the Indian Embassy, if they carry a conforming Apostille certificate.*

## Appendix D

### Power of Attorney for Authorized Signatory of JV/Consortium Partners.

**(For Bidders in India to be executed on non-judicial Stamp paper of appropriate value. For Bidders from outside India, submission of this form is not mandatory. If an equivalent form is submitted by Bidders from outside India, it is to be executed according to the applicable law in the Bidder's country and by taking into account the Notes shown below.)**

Know all men by these presents, we, M/s. \_\_\_\_\_ (Lead Partner), M/s. \_\_\_\_\_, M/s. \_\_\_\_\_, .... and M/s. \_\_\_\_\_ do hereby constitute, appoint and authorize Mr/Ms \_\_\_\_\_ who is presently employed with us and holding the position of \_\_\_\_\_ as our attorney, to do in our name and on our behalf, all such acts, deeds and things necessary in connection with or incidental to our bid for the work of \_\_\_\_\_ (insert the name of work) including signing and submission of all documents and providing information/responses to Dedicated Freight Corridor Corporation of India Limited, representing us in all matters, dealing with Dedicated Freight Corridor Corporation of India Limited in all matters in connection with our bid for the said project.

We hereby agree to ratify all acts, deeds and things lawfully done by our said attorney pursuant to this Power of Attorney and that all acts, deeds and things done by our aforesaid attorney shall and shall always be deemed to have been done by us.

Dated this the \_\_\_\_\_ day of \_\_\_\_\_ 201\_\_\_\_.

(Signature of Authorized Signatory)

\_\_\_\_\_  
(Signature and Name in Block letters of Signatory)  
Seal of Company

Witness

Witness 1:

Name:

Address:

Occupation:

Witness 2:

Name:

Address:

Occupation:

### Notes:

- In case of existing joint venture, the certified copy of (JV)/ Consortium Agreement may be furnished.*
- The mode of execution should be in accordance with the procedure, if any, laid down by the applicable law in the bidder's country and the charter documents of the executants(s) and when it is so required, the same should be under common seal affixed in accordance with the required procedure.*
- Whenever required, the Bidder should submit for verification the extract of the charter documents and the shareholder resolution in favour of the person executing this document on behalf of the bidder.*
- For a required document executed and issued overseas, the document will also have to be legalised by the Indian Embassy in the Bidder's country and notarized in the jurisdiction where it is being issued. However, documents provided by Bidders from countries that have signed the Hague Legislation Convention 1961 are not required to be legalized by the Indian Embassy, if they carry a conforming Apostille certificate.*



## Appendix E

**Power of Attorney to Authorized Representative of Joint Venture (JV)/Consortium**  
(For Bidders in India to be executed on non-judicial Stamp paper of appropriate value. For Bidders from outside India, submission of this form is not mandatory. If an equivalent form is submitted by Bidders from outside India, it is to be executed according to the applicable law in the Bidder's country and by taking into account the Notes shown below.)

### POWER OF ATTORNEY<sup>1</sup>

Whereas Dedicated Freight Corridor Corporation of India Limited has invited bids for the work of \_\_\_\_\_ (insert the name of work) and

Whereas, the members of the Joint Venture/Consortium comprising of M/s. \_\_\_\_\_ (lead partner), M/s. \_\_\_\_\_, M/s. \_\_\_\_\_, .... and M/s.----- are interested in submission of bid for this work of in accordance with the terms and conditions contained in the bidding documents.

Whereas, it is necessary for the members of the Joint Venture/Consortium to designate representative of the lead partner as the authorized representative of JV/Consortium, with all necessary power and authority to do, for and on behalf of the Joint Venture/Consortium all acts, deeds and things as may be necessary in connection with the Joint Venture's bid for the project.

NOW THIS POWER OF ATTORNEY WITNESSETH THAT:

We, M/s. \_\_\_\_\_ (Lead Partner), M/s. \_\_\_\_\_, M/s. \_\_\_\_\_, .... and M/s.----- hereby designate Mr/Ms. \_\_\_\_\_, being representative of the lead partner of the Joint Venture/Consortium, as the authorized representative of the Joint Venture/Consortium, to do on behalf of the Joint Venture/Consortium, all or any of the acts, deeds or things necessary or incidental to the Joint Venture/Consortium's bid for the contract, including submission of bid, participating in conferences, responding to queries, submission of information/documents and generally to represent the Joint Venture/Consortium, in all its dealings with the Railway or any other Government Agency or any person, in connection with the contract for the said work until culmination of the process of bidding till the contract agreement is entered into with the Dedicated Freight Corridor Corporation of India Limited and thereafter till the expiry of the contract agreement.

We hereby agree to ratify all acts, deeds and things lawfully done by authorized representative, our said attorney, pursuant to this power of attorney and that all acts deeds and things done by our aforesaid attorney shall and shall always be deemed to have been done by us/ Joint Venture/Consortium.

Dated this the \_\_\_\_\_ day of \_\_\_\_\_ 201\_\_\_\_\_.

(Signature)

(Name in Block letters of Executants)

Seal of Company

Witness 1:

Name:

Address:

Occupation:

Witness 2:

Name:

Address:

Occupation:

<sup>1</sup> To be executed by all the members of the Joint Venture/Consortium except the authorized representative.

#### Notes:

1. In case of existing joint venture, the certified copy of (JV)/ Consortium Agreement may be furnished.

2. *The mode of execution should be in accordance with the procedure, if any, laid down by the applicable law in the bidder's country and the charter documents of the executants(s) and when it is so required, the same should be under common seal affixed in accordance with the required procedure.*
3. *Whenever required, the Bidder should submit for verification the extract of the charter documents and the shareholder resolution in favour of the person executing this document on behalf of the bidder.*
4. *For a required document executed and issued overseas, the document will also have to be legalised by the Indian Embassy in the Bidder's country and notarized in the jurisdiction where it is being issued. However, documents provided by Bidders from countries that have signed the Hague Legislation Convention 1961 are not required to be legalized by the Indian Embassy, if they carry a conforming Appostille certificate.*

## Appendix F

### Information about the Signalling Generic Products:

| Electronic Interlocking  | TPWS  | Multi section digital axle counters   |
|--|---|---|
| 1. Base product has Certified Safety case.   | 1. Base product (Balise, LEU, On board) has certified safety case.  | 1. Product has certified Safety case and has SIL-4 certification from an accredited body.   |
| 2. Base Product is SIL-4 certified by accredited body.   | 2. Base product is SIL-4 certified by accredited body.  | 2. Product is SIL-4 certified by accredited body.   |
| 3. Base Product is under implementation on passenger carrying service.   | 3. Base product (On board system) is under implementation on passenger carrying service.  | 3. Product is used in passenger carrying service.   |
| 4. Modified version of the Base product will be supplied for the work to suit the requirements of the Contract STP5.   | 4. Modified version of LEU along with Balise and Onboard of Base product shall be supplied to suit the requirements of the Contract STP5A.  | -   |
| 5. Safety case and SIL-4 certification from an accredited body for the modified version will be submitted.   | 5. Safety case and SIL-4 certification from an accredited body for the modified version of the LEU will be submitted.   | -   |
| 6. Type tests carried out on the Base model in an accredited laboratory.   | 6. Type tests carried out on the Base model in an accredited laboratory.  | 6. Type tests carried out in an accredited laboratory.  |
| 7. Type tests on the modified version will be carried out in an accredited laboratory.   | 7. Type tests on the modified version of the LEU will be carried out in an accredited laboratory.   | -   |
| 8. The Product falls under <b>Note 3 of para 8</b> of the Procedure order for Cross acceptance/approval (Appendix I of TOR) for the purpose of Provenness of the equipment. (Type tests and Field trials). | 8. The Product falls under <b>Note 3 of para 8</b> of the Procedure order for Cross acceptance/approval (Appendix I of TOR) for the purpose of Provenness of the equipment. (Type tests and Field trials) | 8. The Product falls under <b>Note 2 of para 8</b> of the Procedure order for Cross acceptance/approval (Appendix I of TOR) for the purpose of provenness of the equipment. (Field trials). |

**Appendix G:****PRE CONTRACT INTEGRITY PACT****GENERAL**

This pre- contract Agreement (hereinafter called the Integrity Pact) is made on----- day of the month of -----2016 between, on one hand, the DFCCIL ACTING THROUGH Shri----- Designation of the officer, (hereinafter called the CLIENT, which expression shall mean and include, unless the context otherwise requires, his successors in office and assigns) of the First Part and M/s----- represented by Shri----- Chief Executive Officer (hereinafter called the “BIDDER/SELLER” which expression shall mean and include, unless the context otherwise requires, his successors and permitted assigns) of the Second part.

WHEREAS the CLIENT proposes to procure (NAME OF THE Stores/ Equipment/ Item, Name of the Consultancy Service, Name of Works Contract, Name of Services) and the (A) is willing to offer/has offered for stores or works.

WHEREAS the (A) is a private company/public company/Government undertaking/partnership/ registered export agency, constituted in accordance with the relevant law in the matter and the CLIENT is a PSU performing its functions on behalf of the President of India.

NOW, THEREFOR,

To avoid all forms of corruption by following a system that is fair, transparent and free from any influence/prejudiced dealings prior to, during and subsequent to the currency of the contract to be entered into with a view to:-

Enabling the CLIENT to obtain the desired said (Name of the Stores/Equipment/Item, Name of the Consultancy Service, Name of Works Contract, Name of Services) at a competitive price in conformity with the defined specifications by avoiding the high cost and the distortionary impact of corruption on public procurement, and

Enabling BIDDERS to abstain from bribing or indulging in any corrupt practice in order to secure (B) by providing assurance to them that their competitors will also abstain from bribing and other corrupt practices and the CLIENT will commit to prevent corruption, in any form, by its officials by following transparent procedures.

The parties hereto hereby agree to enter into this Integrity Pact and agree as follows:

**Commitments of the CLIENT**

- 1.1 The CLIENT undertakes that no official of the CLIENT, connected directly or indirectly with the (B), will demand, take a promise for or accept, directly or through intermediaries, any bribe, consideration, gift, reward, favour or any

material or immaterial benefit or any other advantage from the (A) either for themselves or for any person, organization or third party related to the (B), in exchange for an advantage in the bidding process, bid evaluation, contracting or implementation process ( as applicable) related to the (B).

- 1.2 The CLIENT will, during the pre-contract stage, treat all BIDDERS alike, and will provide any such information to any particular BIDDER which could afford an advantage to that particular (A) in comparison to other BIDDERS.
- 1.3 All the officials of the CLIENT will report to the appropriate Government office any attempted or completed breaches of the above commitments as well as any substantial suspicion of such a breach.
2. In case any such preceding misconduct on the part of such official(S) in reported by the (A) to the CLIENT with full and verifiable facts and the same is prima facie found to be correct by the CLIENT, necessary disciplinary proceedings, or any other action as deemed fit, including criminal proceedings may be initiated by the CLIENT and such a person shall be debarred from further dealings related to the (B) process. In such a case while an enquiry is being conducted by the CLIENT the proceedings under the (B) would not be stalled.

#### Commitments of BIDDERS

3. The (A) commits itself to take all measures necessary to prevent corrupt practices, unfair means and illegal activities during any stage of the Contract its bid or during any pre-contract or post- contract stage in order to secure the (B) contract or in furtherance to secure it and in particular commit itself to the following;-
  - 3.1 The (A) will not offer, directly or through intermediaries, any bribe, gift, consideration, reward, favour, any material or immaterial benefit or other advantage, commission, fees, brokerage or inducement to any official of the CLIENT, connected directly or indirectly with the bidding process, or to any person, organization or third party related to the (B) in exchange for any advantage in the bidding, evaluation, contracting and implementation of the (B). ( as applicable).
  - 3.2 The (A) further undertakes that it has not given, offered or promised to give, directly or indirectly any bribe, gift, consideration, reward, favour, any material or immaterial benefit or other advantage, commission, fees, brokerage or inducement to any official of the CLIENT or otherwise in procuring the Contract or forbearing to do or having done any act in relation to the obtaining or execution of the (B) or any other (B) with the Government for showing or forbearing to show favour or disfavor to any person in relation to the (B) or any other (B) with the Government.

- 3.3\* (A) shall disclose the name and address of agents and representatives and Indian (A) shall disclose their foreign principals or associates.
- 3.4\* (A) shall disclose the payments to be made by them to agents/brokers or any other intermediary, in connection with this bid/contract.
- 3.5 deleted
- 3.6 The (A) either while presenting the bid or during pre-contract negotiations or before signing the (B) shall disclose any payments he has made, is committed to or intends to make to officials of the CLIENT or their family members, agents, brokers or any other intermediaries in connection with (B) and the detail of services agreed upon for such payments.
- 3.7 The (A) will not collude with other parties interested in the (B) to impair the transparency, fairness and progress of the bidding process, bid evaluation, contracting and implementation of the (B).
- 3.8 The (A) will not accept any advantage in exchange for any corrupt practice unfair means and illegal activities.
- 3.9 The (A) shall not use improperly, for purposes of competition or personal gain, or pass on to others, any information provided by the CLIENT as part of the business relationship, regarding plans, technical proposals and business details, including information contained in any electronic data carrier. The (A) also undertakes to exercise due and adequate care lest any such information is divulged.
- 3.10 The (A) commits to refrain from giving any complaint directly or through any other manner without supporting it with full and verifiable facts.
- 3.11 The (A) shall not instigate or cause to instigate any third person to commit any of the actions mentioned above.
- 3.12 If the (A) or any employee of the (A) or any person acting on behalf of the (A), either directly or indirectly, is a relative of any of the officers of the CLIENT, or alternatively, if any relative of an officer of the CLIENT has financial interest/stake in the BIDDER's firm, the same shall be disclosed by the (A) at the time of filling of tender.

The term 'relative' for this purpose would be as defined in Section 6 of the Companies Act 1956.

- 3.13 The (A) shall not lend to or borrow any money from or enter into any monetary dealings or transactions, directly or indirectly, with any employee of the CLIENT.

#### 4 Previous Transaction

- 4.1 The (A) declares that no previous transgression occurred in the last three years immediately before signing of this Integrity Pact, with any other company in any country in respect of any corrupt practices envisaged hereunder or with any Public Sector Enterprise in India or any Government Department in India that could justify BIDDER's exclusion from the tender process.
- 4.2 The (A) agrees that if it makes incorrect statement on this subject, (A) can be disqualified from the tender process or the contract, if already awarded, can be terminated for such reason.

#### 5 Security Deposit

- 5.1 (A) shall deposit an amount -----( specified in RFP) as security Deposit, with the CLIENT in the mode as specified in the RFP.
- 5.2 The security Deposit shall be valid up to a period of five years or the complete conclusion of the contractual obligations to the complete satisfaction of both the BIDDER and the CLIENT, including warranty period, whichever is later.
- 5.3 In case of the successful (A) a clause would also be incorporated in the Article pertaining to Performance Guarantee in the (B) that the provisions of Sanctions for Violation shall be applicable for forfeiture of Performance Bond in case of a decision by the CLIENT to forfeit the same without assigning any reason for imposing sanction for violation of this pact.
- 5.4 No Interest shall be payable by the CLIENT to the [A] on Earnest Money/Security Deposit for the period of its currency.

#### 6. **Sanctions for Violations**

6.1 Any breach of the aforesaid provisions by the [A] or any one employed by it or acting on its behalf (whether with or without the knowledge of the [A]) shall entitle the CLIENT to take all or any one of the following actions, wherever required:-

- (i) To immediately call off the pre-contract negotiations without assigning any reason or giving any compensation to the [A]. However, the proceeding with the other BIDDER(s) would continue.
- (ii) The EMD ( in pre contract stage) and /or Security Deposit/Performance Bond (after the [B] is signed) to assign any reason therefore.
- (iii) To immediately cancel the [B], if already signed, without giving any compensation to the [A].

- (iv) To recover all sums already paid by the CLIENT, and in case of an Indian [A] with interest thereon at 2% higher than the prevailing Prime Lending Rate of State Bank of India, while in case of [A] from the country other than India with interest thereon at 2% higher than the LIBOR. If any outstanding payment is due to the [A] from the CLIENT in connection with any other [B], such outstanding payment could also be utilized to recover the aforesaid sum and interest.
  - (v) To encash the advance bank guarantee and performance bond/warranty bond, if furnished by the [A], in order to recover the payments, already made by the CLIENT, along with interest.
  - (vi) To cancel all or any other Contracts with the [A]. The [A] shall be liable to pay compensation for any loss or damage to the CLIENT resulting from such cancellation/rescission and the CLIENT shall be entitled to deduct the amount so payable from the money(s) due to the [A].
  - (vii) To debar the [A] from participating in future bidding processes of the Government of India from a minimum period of five years, which may be further extended at the discretion of the CLIENT.
  - (viii) To recover all sums paid in violation of this Pact by [A] to any middleman or agent or broker with a view to securing [B] the contract.
  - (ix) In cases where irrevocable Letters of Credit have been received in respect of any [B] signed by the CLIENT with the [A], the same shall not be opened.
  - (x) Forfeiture of Performance Bond in case of a decision by the CLIENT to forfeit the same without assigning any reason for imposing sanction for violation of this Pact.
- 6.2 The CLIENT will entitle to take all or any of the actions mentioned at para 6.1 (i) to (x) of the Pact also on the Commission by the [A] or any one employed by it or acting on its behalf (whether with or without the knowledge of the [A], of an offence as defined in Chapter IX of the Indian Penal Code, 1860 or Prevention of Corruption Act, 1988 or any other statute enacted for prevention of corruption.
- 6.3 The decision of the CLIENT to the effect that a breach of the provisions of this Pact has been committed by the [A] shall be final and conclusive on the [A]. However, the [A] can approach the independent Monitor(s) appointed for the purposes of this Pact.

## 7. **Fall Clause**



- 7.1 The [A] undertakes that it has not supplied/is not supplying similar product/systems or subsystems at a price lower than that offered in the present bid in respect of any other Ministry/Department of the Government of India or PSU and if it is found at any stage that similar product/system or sub systems was supplied by the [A] to any other Ministry/Department of the Government of India or a PSU at a lower price, then that very price, with due allowance for elapsed time, will be applicable to the present case and the difference in the cost would be refunded by the [A] to the CLIENT, if the [B] has already been concluded.

## 8. **Independent Monitors**

- 8.1 The CLIENT shall appointed Independent Monitors (hereinafter referred to as Monitors) for this Pact in consultant with the Central Vigilance Commission.
- 8.2 The task of the Monitors shall be to review independently and objectively, whether and to what extent the parties comply with the obligations under this Pact.
- 8.3 The Monitors shall not be subject to instructions by the representatives of the parties and perform their functions neutrally and independently.
- 8.4 Bothe the parties accept that the Monitors have the right to access all the documents relating to the project/procurement, including minutes of meetings.
- 8.5 As soon as the Monitor notices, or has reason to believe, a violation of this Pact, he will so inform the Authority designated by the CLIENT.
- 8.6 The BIDDER(s) accepts that the Monitor has the right to access without restriction to all project documentation of the CLIENT including that provided by the BIDDER. The [A] will also grant the Monitor, upon his request and demonstration of a valid interest, unrestricted and unconditional access to his project documentation. The same is applicable to Subcontractors. The Monitor shall be under contractual obligation to treat the information and documents of the [A] with confidentiality.
- 8.7 The CLIENT will provide to the Monitor sufficient information about all meetings among the parties related to the Project provided such meetings could have an impact on the contractual relations between the parties. The parties will offer to the Monitor the option to participate in such meetings.
- 8.8 The Monitor will submit a written report to the MD/DFCCIL within 8 to 10 weeks from the date of reference or intimation to him by the

CLIENT/BIDDER and should the occasion arise, submit proposals for correcting problematic situations.

9. **Facilitation of Investigation.**

In case of any allegation of violation of any provisions of this Pact or payment of commission, the CLIENT or its agencies shall be entitled to examine all the documents including the Books of Accounts of the [A] and the [A] shall provide necessary information and documents in English and shall extend all possible help for the purpose of such examination.

10. **Law and Place of Jurisdiction**

This Pact is subject to Indian Law. The place of performance and jurisdiction is the seat of the CLIENT.

11. **Other Legal Actions**

The actions stipulated in this integrity Pact are without prejudice to any other legal action that may follow in accordance with the provisions of the extant law in force relating to any civil or criminal proceedings.

12. **Validity**

12.1 The validity of this Integrity Pact shall be from the date of its signing and extend upto 5 years or the complete execution of the [B] to the satisfaction of both the CLIENT and the [A], including warranty period, whichever is later.

12.2 Should one or several provisions of this Pact turn out to be invalid; the remainder of this Pact shall remain valid. In this case, the parties will strive to come to an agreement to their original intentions.

13. The parties hereby sign this Integrity Pact at \_\_\_\_\_ on \_\_\_\_\_

CLIENT  
Name of the Officer  
Designation  
Deptt./Ministry/PSU

BIDDER  
CHIEF EXECUTIVE OFFICER

Witness

1. \_\_\_\_\_

2. \_\_\_\_\_

Witness

1. \_\_\_\_\_

2. \_\_\_\_\_

**Note:**

**[A] – To be replaced by BIDDER/Seller/Consultancy firm/Service provider as the case was may be.**

**[B]- To be replaced by Contract/Supply/Consultancy Contract/Works Contract as the case was may be.**

## Appendix H – Form of Advance Payment Security

**Note:** See Clause GC 6.4(a) and Clause SC 6.4(a).

### Bank Guarantee for Advance Payment

\_\_\_\_\_ [Bank's Name and Address of Issuing Branch or Office]

**Beneficiary:** \_\_\_\_\_ [Name and Address of Client]

**Date:** \_\_\_\_\_

**ADVANCE PAYMENT GUARANTEE No.:** \_\_\_\_\_

We have been informed that [*name of Consulting Firm*] (hereinafter called “the Consultants”) has entered into Contract No. [*reference number of the contract*] dated [*date*] with you, for the provision of [*brief description of Services*] (hereinafter called “the Contract”).

Furthermore, we understand that, according to the conditions of the Contract, an advance payment in the sum of [*amount in figures*] ([*amount in words*]) is to be made against an advance payment guarantee.

At the request of the Consultants, we [*name of Bank*] hereby irrevocably undertake to pay you any sum or sums not exceeding in total an amount of [*amount in figures*] ([*amount in words*])<sup>1</sup> upon receipt by us of your first demand in writing accompanied by a written statement stating that the Consultants are in breach of their obligation under the Contract because the Consultants have used the advance payment for purposes other than toward providing the Services under the Contract.

It is a condition for any claim and payment under this guarantee to be made that the advance payment referred to above must have been received by the Consultants on their account number \_\_\_\_\_ at [*name and address of Bank*].

The maximum amount of this guarantee shall be progressively reduced by the amount of the advance payment repaid by the Consultants as indicated in copies of your certified

<sup>1</sup> The Guarantor shall insert an amount representing the amount of the advance payment and denominated either in the currency(ies) of the advance payment as specified in the Contract, or in a freely convertible currency acceptable to the Client.

statements to such effect which shall be presented to us by the Consultants. This guarantee shall expire, at the latest, upon our receipt of the certified payment certificate issued by you indicating that the Consultants have made full repayment of the amount of the advance payment, or on the \_\_\_\_ day of [month][year]whichever is earlier. Consequently, any demand for payment under this guarantee must be received by us at this office on or before that date. The Guarantor agrees to a one-time extension of this guarantee for a period not to exceed one year, in response to the Client's written request for such extension, such request to be presented to the Guarantor before the expiry of the guarantee.

This guarantee is subject to the Uniform Rules for Demand Guarantees, ICC Publication No. 758.

---

*[signature(s)]*

**Note:** *All italicized text is to assist in preparing this form and shall be deleted from the final product.*

**APPENDIX I – NOT USED.****APPENDIX J – FORM OF BANK GUARANTEE FOR BID SECURITY**

(Note: See para 7 of Letter of Invitation)

*[Insert bank's name, and address of issuing branch or office]***Beneficiary:** *[insert name and address of Employer]***Date:** *[insert date]***BID GUARANTEE No.:** *[insert number]*

1. KNOW ALL MEN by these presents that we \_\_\_\_\_  
(name of bank) having our registered office at \_\_\_\_\_  
(Name of Country) (hereinafter called "the bank" which expression shall unless it be repugnant to the subject or context hereof be deemed to include its successors and assigns) are bound unto DEDICATED FREIGHT CORRIDOR CORPORATION OF INDIA LIMITED, having Corporate office at \_\_\_\_\_ (herein after called "the employer") in the sum of Rs. \_\_\_\_\_ for which payment will and truly to be made to the said employer, the bank binds itself, its successors and assigns by these presents.
2. WHEREAS \_\_\_\_\_ (Name of Consultants), hereinafter called "the Consultants" has desired to submit its proposal dated \_\_\_\_\_ for \_\_\_\_\_  
AND WHEREAS the Consultants is/are required to furnish a Bank Guarantee for the sum of Rs. \_\_\_\_\_ as Tender/Bid Security against the Consultants proposal as aforesaid.  
AND WHEREAS \_\_\_\_\_ (Name of Bank) have, at the request of the Consultants, agreed to give this guarantee as hereinafter contained.
3. We further agree as follows:
  - a. that the Employer may without affecting this guarantee grant time or other indulgence to or negotiate further with the Consultants in regard to the conditions contained in the said RFP document and thereby modify these conditions or add thereto any further conditions as may be mutually agreed upon between the Employer and the Consultants.
  - b. That the guarantee hereinbefore contained shall not be affected by any change in the constitution of our Bank or in the Constitution of the Consultants.
  - c. That this Guarantee commences from the date hereof and shall remain in force till \_\_\_\_\_ (as prescribed in the terms and conditions of the RFP Document).
  - d. That the expression 'the Consultants and 'the bank' herein used shall, unless such an interpretation is repugnant to the subject or context, include their respective successors and assigns.

## 4. THE CONDITIONS OF THIS OBLIGATION ARE :

- (a) If the Consultants has/have withdrawn its Bid during the period of Bid validity specified in the RFP Document; or
- (b) If the Consultant(s) does not accept the correction of errors in accordance with the Instructions to Consultants (hereinafter "the ITC") of the RFP; or
- (c) having been notified of the acceptance of its Bid by the Employer during the period of Bid validity, (i) fails or refuses to execute the Contract Form, if required, or (ii) fails or refuses to furnish the Performance Security, in accordance with the conditions of the RFP document.

We absolutely, irrevocably undertake to pay to the Employer mere on demand without any protest or demur upto the above amount upon receipt of his written demand, without having to substantiate his demand provided that in his demand the Employer will note that the amount claimed by him is due to him owing to the occurrence of any one or more of the conditions (a), (b), (c) mentioned above, specifying the occurred condition or conditions.

This guarantee is subject to the Uniform Rules for Demand Guarantees, ICC Publication No. 758.

Signature of .....  
Authorized official of the Bank

Name of Official  
Designation  
Stamp/seal of the bank

## APPENDIX K - FORM OF BANK GUARANTEE FOR PERFORMANCE GUARANTEE

(Note: See Clause SC 3.13.)

TO: [Name and Address of Employer]

Whereas (Name & Address of the Consultants, hereinafter called "the Consultants"), has/have undertaken, in pursuance of (Name and Number of the proposal) a contract for \_\_\_\_\_.

And whereas it has been stipulated by DFCCIL in the said RFP Document that the Consultant shall furnish a Bank Guarantee by a Scheduled Commercial Indian Bank for the sum specified therein as security for compliance with his obligation in accordance with the conditions of this document.

And whereas we (Name and Address of the Bank) have agreed to give the Consultant such a Bank Guarantee.

Now therefore we hereby affirm that we are the Guarantor and responsible to you on behalf of the Consultant, upto a total of Rs. \_\_\_\_\_ such sum being payable in type and proportions of currencies in which the contract price is payable and we undertake and guarantee unconditionally and irrevocably to pay you, upon first written demand without cavil or argument, any sum or sums within the limits of Rs. \_\_\_\_\_ as aforesaid without your needing to prove or to show grounds or reasons for your demand for the sum specified therein.

We hereby waive the necessity of your demanding the said debt from the Consultant before presenting us with the demand.

We further agree that no change or addition to or other modification of the terms of the contract or of the services to be performed thereunder or of any of the contract documents which may be made between you and the Consultant shall in any way release us from any liability under this guarantee, and we hereby waive notice of such change, addition or modification.

This guarantee shall be valid upto \_\_\_\_\_ (three months beyond the scheduled/extended date of completion of services).

This guarantee is subject to the Uniform Rules for Demand Guarantees, ICC Publication No. 758.

Signature and Seal of the Guarantor

Name of Bank

Name and Designation of the person signing

Address

Date



**Section 8.****Key Dates of STP-5 & STP-5A (relevant to the RFP)**

| <b>WDFC<br/>Phase-1<br/>Contract<br/>s</b> | Description   | No. of Weeks<br>(Days) from<br>Commencement<br>Date | Weeks | Days | Date     |
|--|---|---|-------|------|----------|
| <b><u>STP-5</u></b>                        | Completion of Detailed System Design & Installation Design  | 40 W (280 D)  | 40    | 280  | 16.10.16 |
|  | Completion of Signalling and Telecom works on Rewari-Dabla section for commencement of testing of Prototype Loco. | 95 W (665 D)  | 95    | 665  | 05.11.17 |
|  | Integrated Testing & Commissioning for Rewari-Ikbalgarh.  | 148 W (1036 D)                                      | 148   | 1036 | 11.11.18 |
|  | Completion & Works Taking Over for Rewari-Ikbalgarh   | 160 W (1120 D)                                      | 160   | 1120 | 03.02.19 |
|  | Integrated Testing & Commissioning for Ikbalgarh-Makarpura  | 204 W (1428 D)                                      | 204   | 1428 | 08.12.19 |
|  | Completion & Works Taking Over for Ikbalgarh-Makarpura  | 216 W (1512 D)                                      | 216   | 1512 | 01.03.20 |
| <b><u>STP-5A</u></b>                       | Integrated Testing & Commissioning for Rewari-Ikbalgarh   | 145 W (1015 D)                                      | 145   | 1015 | 12.03.19 |
|  | Completion & Works Taking Over for Rewari-Ikbalgarh   | 157 W (1099 D)                                      | 157   | 1099 | 04.06.19 |
|  | Integrated Testing & Commissioning for Ikbalgarh-Makarpura  | 201 W (1407 D)                                      | 201   | 1407 | 07.04.20 |
|  | Completion & Works Taking Over for Ikbalgarh-Makarpura  | 213 W (1491 D)                                      | 213   | 1491 | 30.06.20 |

**Note:** Ikbalgarh is located near Palanpur.