

उत्तर पश्चिम रेलवे

NORTH WESTERN RAILWAY

बिजली विभाग

(ELECTRICAL DEPARTMENT)

ई-निविदा प्रपत्र

E-TENDER DOCUMENT

TOP SHEET

निविदा संख्या

Tender No.

EL-JP-03R-2026-27

कार्य का नाम

Name of work:

Electrical work in connection with [1] Replacement of old/Dilapidated quarters at RGS, SIKR, JJN stns Type-II (20units), [2] Construction of new quarters for staff/officers at>NNL,NIP,DBLA of Type-II(08 Units),Type-III(05 Units)& Type-IV(02 Units)=15, [3] Providing 15 units Type II quarters in lieu of old abandoned quarters for Gang No. 39,40 & 42 in SIKAR - LHU section, [4] Providing 8 units Type II quarters in lieu of old abandoned quarters for Gang No. 27 & 28 in JP- RGS section, [5] Replacement of old/Dilapidated quarters at FL,NRI,KSG stns Type-II(13 units),Type-III(05Units)&Type-IV(02 Units) =20 units, [6] Provision of Staff quarters at old KSG Station Type-2(08Nos) ,Type-III(04Nos) & Type-IV(01Nos) Total=13 Nos

कार्यालय

वरिष्ठ मण्डल बिजली इंजीनियर

उत्तर पश्चिम रेलवे

बिजली विभाग, मंडलरेलप्रबन्धक कार्यालय,

पावर हाउस रोड, जयपुर- 302006

E-TENDER DOCUMENT

TOP SHEET- II

- 1 Tender No. : **EL-JP-03R-2026-27**
- 2 Name of work : Electrical work in connection with [1] Replacement of old/Dilapidated quarters at RGS, SIKR, JJN stns Type-II (20units), [2] Construction of new quarters for staff/officers at>NNL,NIP,DBLA of Type-II(08 Units),Type-III(05 Units)& Type-IV(02 Units)=15, [3] Providing 15 units Type II quarters in lieu of old abandoned quarters for Gang No. 39,40 & 42 in SIKAR - LHU section, [4] Providing 8 units Type II quarters in lieu of old abandoned quarters for Gang No. 27 & 28 in JP- RGS section, [5] Replacement of old/Dilapidated quarters at FL,NRI,KSG stns Type-II(13 units),Type-III(05Units)&Type-IV(02 Units) =20 units, [6] Provision of Staff quarters at old KSG Station Type-2(08Nos) ,Type-III(04Nos) & Type-IV(01Nos) Total=13 Nos
- 3 Approximate cost of work : Rs. 10855504.78
- 4 Bid Security /Earnest Money : Rs. 217100.00
- 5 Completion Period : 12 months
- 6 Date & Time of Closing E-tender : 10.07.2026 15.00 hours
- 7 Date & Time of opening E-tender : 10.07.2026 After 15.00 hours

Issued by

मण्डल रेल प्रबन्धक (बिजली)

उत्तर पश्चिम रेलवे जयपुर

भारत संघ के राष्ट्रपति के लिए तथा उनकी ओर से

बिजली विभाग, मंडल रेल प्रबन्धक कार्यालय,

पावर हाउस रोड, जयपुर – 302006

TENDER FORMS

Name of work: Electrical work in connection with [1] Replacement of old/Dilapidated quarters at RGS, SIKR, JJN stns Type-II (20units), [2] Construction of new quarters for staff/officers at NNL,NIP,DBLA of Type-II(08 Units),Type-III(05 Units)& Type-IV(02 Units)=15, [3] Providing 15 units Type II quarters in lieu of old abandoned quarters for Gang No. 39,40 & 42 in SIKAR - LHU section, [4] Providing 8 units Type II quarters in lieu of old abandoned quarters for Gang No. 27 & 28 in JP-RGS section, [5] Replacement of old/Dilapidated quarters at FL,NRI,KSG stns Type-II(13 units),Type-III(05Units)&Type-IV(02 Units) =20 units, [6] Provision of Staff quarters at old KSG Station Type-2(08Nos) ,Type-III(04Nos) & Type-IV(01Nos) Total=13 Nos

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TENDER FORMS

To

The President of India
Acting through the Sr. Divisional Electrical Engineer
North Western Railway, Jaipur

Name of work: Electrical work in connection with [1] Replacement of old/Dilapidated quarters at RGS, SIKR, JJN stns Type-II (20units), [2] Construction of new quarters for staff/officers at>NNL,NIP,DBLA of Type-II(08 Units),Type-III(05 Units)& Type-IV(02 Units)=15, [3] Providing 15 units Type II quarters in lieu of old abandoned quarters for Gang No. 39,40 & 42 in SIKAR - LHU section, [4] Providing 8 units Type II quarters in lieu of old abandoned quarters for Gang No. 27 & 28 in JP- RGS section, [5] Replacement of old/Dilapidated quarters at FL,NRI,KSG stns Type-II(13 units),Type-III(05Units)&Type-IV(02 Units) =20 units, [6] Provision of Staff quarters at old KSG Station Type-2(08Nos) ,Type-III(04Nos) & Type-IV(01Nos) Total=13 Nos

Tender No : EL-JP- 03R-2026-27

1. I/We_____have read the various conditions to tender attached hereto and agree to abide by the said conditions. I/We also agree to keep this offer open for acceptance for a period of ____days from the date fixed for closing of the tender and in default thereof, I/We will be liable for forfeiture of my/our "Bid Security". I/We offer to do the work for_____Railway, at the rates quoted in the attached bill(s) of quantities and hereby bind myself/ourselves to complete the work in all respects within_____months from the date of issue of letter of acceptance of the tender.
2. I/We also hereby agree to abide by the Indian Railways Standard General Conditions of Contract, with all correction slips up-to-date and to carry out the work according to the Special Conditions of Contract and Specifications of materials and works as laid down by Railway in the annexed Special Conditions/Specifications, Standard Schedule of Rates (SSOR) with all correction slips up-to-date for the present contract.
3. A Bid Security of ₹_____has already been deposited online/ submitted as Bank Guarantee bond. Full value of the Bid Security shall stand forfeited without prejudice to any other right or remedies in case my/our Tender is accepted and if:
 - (a) I/We do not submit the Performance Guarantee within the time specified in the Tender document;
 - (b) I/We do not execute the contract documents within seven days after receipt of notice issued by the Railway that such documents are ready; and
 - (c) I/We do not commence the work within fifteen days after receipt of orders to that effect.
4. (a) I/We am/are a Startup firm registered by Department of Industrial Policy and Promotion (DIPP) and my registration number is valid upto(Copy enclosed)
and hence exempted from submission of Bid Security.
5. We are a Labour Cooperative Society and our Registration No. is withand hence required to deposit only 50% of Bid Security.
6. Until a formal agreement is prepared and executed, acceptance of this tender shall constitute a binding contract between us subject to modifications, as may be mutually agreed to between us and indicated in the letter of acceptance of my/our offer for this work.

Signature of Witnesses :

- (1)
- (2)

(Signature of Tenderer (s)
Address of the Tenderer(s)

SPECIAL TECHNICAL CONDITIONS FOR ELECTRICAL WORK.

Where there is any conflict between the Tender document on one hand and GCC of works- April 2022 (With all correction slips) on the other hand, the tender documents shall prevail. The work shall be carried out strictly as per applicable rules & regulations, manuals and applicable code of practices. If any minor alterations are found necessary, the contractor will do the same within the quoted rates. The work shall be carried out in best workmanlike manner and any defect in the work of changes in the design etc. as pointed out by Inspecting authority shall be carried out by the contractor within quoted rates. In case of any dispute regarding the lay out and any other technical matter, the decision of Sr. Divisional Electrical Engineer Jaipur will be final and binding on the contractors. The work shall be carried out in accordance with the approved specification/drawing and other relevant standard of general electrical work as specified in tender by Engineer. Work shall be carried out strictly as per IE rules and wherever applicable equipment should comply with latest Indian Standards, Statutory Regulations and Labour Acts etc. Contractor shall arrange shutdown and clearance of power block also at his own cost. Contractor should have all testing equipment for testing of cable/ earthing before commissioning of line. Contractor should have all safety equipment during working at site like earthing chain, safety belts, helmet etc. First aid box must available every time at site during working.

1. ENERGY EFFICIENT EQUIPMENT:

Energy efficient equipment shall be used as prescribed in energy Conservation Building Code-2007 of BEE or latest and star ratings of BEE wherever applicable. Contractor shall arrange inspection of major electrical expenditure as per railway equipment at his own requirement.

2. WORKMANSHIP AND ESTHETICALLY LOOKING OF PROJECT SITE:

The work shall be carried out in best workmanship in term of working manner, esthetically matching with building design and any defect in the work due to changes in the design etc. as pointed out by Railway authority shall be carried out by the contractor. Though all design parameter concerning with safety, esthetically looking of electrical system will not have pertains with engineering construction official at any level.

3. DISPUTE IN LAY OUT AND TECHNICAL MATTER:

In case of any dispute regarding the lay out wiring plan, regarding site / location / height for fitment / installation of equipment of electrical equipment, selection of size and colour of body surface of equipment and in any other technical matter, the decision of railway Supervisor of Electrical department (Jaipur division) / Divisional Electrical engineer (Jaipur division) / Sr. Divisional Electrical Engineer (Jaipur division) Jaipur will be final and its binding on the contractor within terms and conditions of GCC April-2022 with latest amendment. All aforesaid parameter concerning with safety, esthetically looking of electrical system will not have pertains with engineering construction official at any level.

4. DRAWING AND DIAGRAM:

(a) Contractor shall submit design & drawing (with showing of colour of R Y B phase, neutral and earth wire as per IS : 732 or latest code of practice of house wiring) of different circuits of electrical power supply system for outdoor work / building wiring system for indoor work, in which clearly indicating the position / location of Main Distribution Board(MDB) i.e. Main LT panel, APFC panel and AMF panel, Secondary Distribution Board (SDB) i.e Secondary LT panel or VTPN, Branches Distribution Board (SDB)

i.e. TPN/SPN/ /RR plug/AC box, Switch boards, ceiling roses, fan boxes, all type of lights / fans, all type AC's, / Room heater / geyser to ensure safety and quality aspect of work.

- (b) Contractor must submit all drawing / diagram with written letter in Electrical construction office for getting approval from concern electrical official. Contract must get approval of aforesaid drawing / diagram before starting the work to avoid or minimize alteration or damage in masonry work of wall / floor.
- (c) All approved plans and drawing contractor may submit to concern Sr. Divisional Electrical Engineer (Jaipur division), office as complete set of (01 originals in multi colour/Jat mat paper and 06 copies in multi colour) approved drawings including soft copies. Contractor always kept one set of all above drawing/diagram / circuit plan at site for maintain technical standard of electrical work.
- (d) It is responsibilities of contractor, may ensure the present of his authorized Electrical Engineer (As mentioned in OCA & GCC) along with all approved / proposed drawing and diagram during inspection of Sr.DEE (G) /PCEE . If contractor failed, its leading delayed in work i.e. contractor has not shown sufficient interest to speed up the work as per specification / instruction of railway representative.

5. SITE ORDER REGISTOR:

Railway representative kept site order register at site for issuing written instruction to contractor and its binding on contractor to sign on site order register. If contractor deny or failed to sign site order register, its treated escaping form site and it's may become cause to work not commencement or cause of slow progress.

6. INSPECTION AND LAB TESTING OF MATERIAL:

For inspecting Major/high value items, Railway's representative/RITES/Third Party may visit the manufacturer's premises to conduct the test, if necessary. Any sample, if necessary, may be sent by Railway 's representative to manufacturer/test house for ascertaining originality/parameters as per specifications and cost of test shall be borne by the contractor. Pre commissioning tests, if needed, on various equipment shall be carried out by the contractor in presence of Railway authorized representative.

- (a) For inspection of the material as desired by Railway, Railway's representative/RITES/Third Party will visit to manufacturer's premises to conduct the tests, if necessary. Contractor shall provide all necessary assistance in carrying out tests and inspection at his own cost.
- (b) Materials having a total value exceeding 5 lakh shall be inspected by RITES/Third Party or as decided by Sr.DEE/G/JP. The cost of the initial inspection shall be borne by the Railway. In case of rejection during inspection, the cost of all subsequent inspections, including the initial inspection, shall be borne by the contractor/firm.
- (c) Pre commissioning visual consignee inspection certificate of electrical equipment may be carried out jointly by Railway site supervisor and contractor if needed. Its responsibilities contractor and Its binding on contractor to sign above certificate and kept at site office. If contractor deny or failed, its treated escaping form site and it's may become cause of slow progress.
- (d) The factory inspection of manufacturer site or materials will be testing by any authorized laboratory of any items of the schedule/part of any job or in schedule can be conducted on the desire of Railway and statutory fees charges bear by contractor. Its responsibilities contractor to sign above reports / certificate and kept at site office. If contractor deny or failed, its treated escaping form site and it's may become cause of slow progress.
- (e) The tests on any of the item /sample/equipment in the schedule/part of any job or in schedule will be performed in an NABL/Govt. Lab. or manufacturer's premises as desired by Railways.
- (f) The cost / fee of factory inspection / lab tests / documentations will be borne by the contractor.

7. WARRENTY CARD:

- (a) At the time of submission of drawings/sample prior to execution work or installation /testing /commissioned the equipment, contractor has to submit relevant documents regarding the certification / self-attested copy of purchasing invoice / bills so that railway may get clarification from manufacture / authorized dealer / seller whenever if needed.
- (b) The specifications and technical catalogues / user manual reflecting all the technical parameters of the item contractor may submit the warranty card prior to claim for / due for bills of equipment, otherwise payment shall not be process.

8. GOVERNMENT STANDARD FOR ELECTRICAL WORK / EQUIPMENT:

- 1. The ISI / BEE or any other relevant mark/label of Indian government or any certificate produced in support, may not be enough to approve the sample, further verifications / factory inspection/lab test may be carried out as per the discretion of Railways.
- 2. The work will be carried out as per CAMETECH recommendation on procedure order for composite tender work for building wiring vide: CAMETECH/E/2017-18/EP-2/Wiring/1.0, May 2017 or latest or others Government standard as mentioned in tender documents.

9. MAKE OF EQUIPMENT AND APPROVAL OF SAMPLE:

- 1. The sample of equipment will be approval by Divisional Electrical Engineer / Assistant Electrical Engineer and Electrical Supervisor is mandatory prior to execution. For this purpose, contractor may submit materials / equipment on firm's letter pad with authorizer signature. In case contractor starting the work his own risk with unapproved sample.
- 2. If such type equipment is failed or not as per specification, railway may instruct to firm to remove failed equipment and provide one new equipment with approval as per specification.
- 3. In case of any kind of confusion/conflict/dispute in drawing/design or in approval of sample / in specification, the decision of Railways Executive officers, Divisional Electrical Engineer / Assistant Electrical Engineer and Electrical Supervisor will be final and binding on the contractor.

10. REFERENCE LIST FOR MAKE OF ELECTRICAL PRODUCTS.

S. N.	Item	Relevant Standards / specifications (Latest Ver.)	Reference Makes
1	Power Transformer	IS: 2026/1977 -2011 (Part- 1 to 10) and IS: 1180/1989 & IS: 2026/1977 for up to 100 KVA, 11 kV outdoor type transformer.	Crompton Greaves, NGEF, Kirloskar, BHEL, Bharat Bijlee, Alsthom (Areva), ABB, Siemens, GEC or Similar.
2	11 kV/HT Vacuum Circuit Breaker, SF-6/11kV gas filled Circuit Breaker	IS: 3427/1997	GEC, Siemens, Crompton Greave, Alsthom (Areva), Jyoti, ABB, BHEL, L&T, Schneider or Similar.
3	ACB(11kV)	IS: 13118/1991	Siemens, L&T, Crompton Greave, Schneider, Jyoti, GEC, ABB, Legrand or Similar.
4	PSS/CSS with HT/LT switch gear, transformer and connected accessories	IS:11171/1985 for dry type Power transformer	ABB, Siemens, L&T, Crompton Greave, BHEL, GEC, Kirloskar, Alsthom (Areva),Schneider or Similar.
5	MCCBs, MCBs, ELCBs/ RCCBs, RCBO, DB, ICTPN, TP, HRC fuse, Changing over switch, Fuse Unit	IS: 8828/1996 for MCB IS:13947(Part-1)/1993 & part 5/Sec1)/2004 for MCCB IS: 12640/2008(Part-1) for RCCB & (Part-2) for RCBO. IS: 13703/1993 for LV HRC fuse IS: 13947(Part-3)/1993 for SFU	L&T, Crompton Greave, Siemens, Legrand, Jyoti, GEC, BCH, Schneider, ABB or Similar.
6	XLPE Cable 11/33kV grade	IS:7098(Part-2)/2011	Asian, NICCO, Universal, RPG, CCI, Fort Gloster, INCAB or Similar.
7	PVC/XLPE Power Cables up to 1.1kV grade	IS: 694/2010 for PVC cable, IS: 1554(Part-1&2)/1988 for heavy duty PVC cable, IS:7098(Part-1)/1988 for XLPE cable	CCI, Universal Cable, RPG, NICCO, Asian, Fort Gloster, Finolex, INCAB or Similar.
8	Instrument Voltmeter, Ammeter, PF meter	IS:1248/2003 for Analog, IS:13875/2008 for digital	Automatic Electric, Meco, Industrial Meter, Motwani, Toshniwal, L&T, Siemens or Similar.

9	11kV Cable End Termination & Jointing kits	<i>IS: 13573/1992 Part-1,2&3/2011</i>	Raychem, M-Seal, Xicon brand of CCI, 3M, Densons (Yamuna) or Similar.
10	Relays	<i>IS: 3231(Part-0&1)/1986 (Part-2&3)/1987</i>	Siemens, L&T, Alsthom, ABB, BHEL, Jyoti, GE or Similar.
11	LED Luminaries, MH, HPSV, T-5 fittings, CFL, &related accessories	<i>IS: 9974(Part-1)/1981 for HPSV IS:15111/2002 for CFL</i>	Phillips, Crompton, Bajaj, GE, Osram, Wipro or Similar.
12	PVC insulated Elect. Wires Sheathed/ unsheathed, PVC flexible LT cable, multicore, single core, Flat cable for submersible pumps	<i>IS: 694/2010 for PVC cable</i>	Finolex, Asian, Fort Gloster, CCI, NICCO, Universal, RPG, INCAB or Similar.
13	Current Transformer	<i>IS: 2705/1992</i>	Automatic Electric, CGL, MECO, Siemens, L&T, Schneider or Similar.
14	On line UPS, Servo Stabilizer, Inverter, CVT	<i>IS:13314/1992 for Inverter IS:11260/1985 for voltage Stabilizer</i>	AEI, BHEL, Hind Rectifier, L&T, NGEF, Siemens, Autometer, Pyramid, APC, Luminous, Microtech, TATA Libert or Similar.
15	Rotary Switches. Selector Switches	<i>Relevant IS</i>	Kaycee, L&T, GE, ABB, Siemens, or Similar.
16	Exhaust fan/Air Circulator/ Bracket & Pedestal fans/Ceiling fan	<i>IS: 374/1979 for ceiling fan IS: 2312/1967 for Exhaust fan</i>	Crompton, GEC, Usha, Philips, Bajaj, Polar, Orient or Similar.
17	Galvanized High Mast Tower / Tubular pole/ Octagonal pole for general purpose lighting	<i>IS:875(Part-3)/1987 for High mast Structure, BSTN-10025/1993 for High Mast Shaft, IS:2026 for other component IS: 2629/1985, BSEN ISO- 1461 for Galvanization</i>	Bajaj, Philips, GE, CGL or Similar.
18	Electronic Energy Meter	<i>IS:13779/1999 IEC:62053-21</i>	L&T, IMP, HPL, Secure, ABB, Enercon or Similar.
19	Central Air Conditioning Plants & Package type plant	<i>IS: 8148/2003 for package type.IS: 1391/1992 for Room Air Conditioners.</i>	Voltas, Blue Star, Carrier, Hitachi, O General, Mitsubishi or Similar.

20	Capacitors- PF correction for Electrical General Services	<i>IS:13340/1993</i> <i>IS:13341/1992</i>	ABB, BHEL, Unistar, WS Insulators, L&T, Hind Rectifier, Voltas, Siemens, Schneider, or Similar.
21	DG Sets- Portable	<i>IS: 13364(Part-1)/1992 for Alternator</i>	Birla Yamaha, CGL, Shriram Honda or Similar.
		<i>IS:10001/1981 for Diesel Engine</i>	
22	DG Engine	<i>IS:13364/1992 For Alternator</i>	Cummins, Kirloskar, Wartsila, Caterpillar, Ashok Leyland or Similar.
23	Alternator for DG set	<i>IS:4722/2001</i> <i>IS:4728/1975</i>	KEC, CGL, Stamford, Kirloskar-Green or Similar.
24	Induction Motor	<i>IS:325/1996</i> <i>IS:12615/2011</i>	Bharat Bijlee, BHEL, CGL, GE, Jyoti, Kirloskar, Siemens, ABB, ASHIKA, NGEF, Alstom or Similar.
25	LT Switchgear & control gears- Contactors & motor starters, Energy Efficient Soft Starter panel/ Earthing Switch, Single phase preventer	<i>IS:13947(Part1)/1993</i> <i>IS:13947(Part4)/1993</i> <i>IS:13947 (Part-5)/2004</i>	ABB, CGL, Jyoti, L&T, NGEF, Siemens, Legrand, BCH, Standard, GEC, BHEL, Schneider or Similar.
26	Pumps- Submersible	<i>IS: 8034/2002 for submersible pump sets</i> <i>IS: 9283/1995 for motors of submersible pump sets</i> <i>IS: 14220/1994 for open well submersible pump sets</i>	Calama, CGL, Jyoti, Kirloskar, KSB or Similar.
27	Timers- electronic solid state	<i>IEC: 60947(2004)</i>	ABB, BHEL, GE, Jyoti, L&T, BCH, Siemens, Legrand or Similar.
28	Water Coolers	<i>IS: 1475 Part-1/2001</i> <i>IS:1475/2005</i>	Blue Star, Kelvinator, Shriram, Voltas or Similar.
29	Electrical accessories (Piano switch, Plugs & sockets, ceiling rose, Angle holder, holders, Modular switch and socket)	<i>IS: 3854/1997 for switches</i> <i>IS: 1293/2005 for plugs & sockets</i> <i>IS: 371/1999 for ceiling rose</i> <i>IS: 1258/2005 for lamp holder Bakelite</i>	SSK (Top line), Anchor (Penta-or-net), Precision (Prime), CONA(Nice- Indian), Legrand, ABB or Similar.
30	Bell Buzzer	<i>IS:2268/1994 or latest</i>	CONA, MAX, Anchor, SSK or Similar.
31	Electronic fan regulator	<i>IS:11037/1984</i>	Anchor, Usha, ERIK, Leader or Similar.

32	Solar cell/Module system	<i>IS: 12834/1989 IEC 61215/2005 IEC 60904-2006</i>	TATA BP, BEL, BHEL, REIL, MOSER BEAR, CEL or Similar.
33	Solar Lighting system	<i>RDSO/PE/SPEC/PS/0093-2008, Rev. 'O' – Amendment 'I'</i>	-----
34	GI/MS Pipe	<i>IS: 1239(Part-1)/1990</i>	TATA, Jindal, Prakash, Surya or Similar.
35	Geysers	<i>IS:2082/1993</i>	Bajaj, Usha, Crompton, Recold, Venus or Similar.
36	Lifts & Escalators	<i>IS-14665/2000 for Lift RDSO/2013/EM/SPEC/0016 Rev (0) for Lift (Elevator) RDSO/PE/SPEC/TL/0095-2008 Rev (0) for Escalator</i>	OTIS, ThyElectrical supervisor nKrupp, Shindler, KONE, Mitsubishi or Similar.
37	LEDs	<i>IS: 16101-2012, IS: 16102-2012 Part-1,2 IS: 16103-2012</i>	NICHIA, OSRAM, SEOUL SEMICONDUCTOR, PHILLIPS LUMILEDS, LEDNIUM or Similar.
38	Solar Water Heaters	<i>RDSO/PE/SPEC/PS/0094-2008 Rev '0'</i>	As per MNRE approved sources.
39	Solar Distilled Water Plants	<i>Relevant IS</i>	As per MNRE approved sources.
40	Energy savers used for lighting loads	<i>RDSO/PE/SPEC/PS/0083-2008 Rev. '0'</i>	As per MNRE approved sources.
41	Air Cooling Plants	<i>Relevant IS for its concern equipments</i>	Voltas, Blue Star, Carrier or Similar.
42	Battery Charger for other than battery room for Train Lighting	<i>IS:2026/2011-power transformer IS:3895/1966 IS:3136/1965 IS:4540/1968</i>	Hind Rectifier, Usha Rectifier, Suresh Electrical, Pyramid, Automatic Electric, Trinity Elect., Universal Ind. Products, Venus Engg., RS Power or Similar.
43	Battery Charger for battery room	<i>As per RDSO specification having re-generation facility</i>	Amar Raja, Exide, RS Power or Similar.
44	PVC Conduit pipe & Casing capping for electrical wiring	<i>IS:9537/2000</i>	Precision, A.K.G., Polycab, Finolex, Prestoplast or Similar.
45	Aluminum Ladders	<i>IS:4571/1977</i>	Sumer, Beatfire or Similar.
46	LT Panels	<i>IS: 2147-1952 IS:2675-1966</i>	
47	Air Curtain	<i>Relevant IS</i>	Aircon, ALMONARD, Technocrate, Thermadyne, Mitzwak or Similar.

11. TERMS AND CONDITION OF PAYMENT:

(a) Stage of payment for electrical work:

- (i) 70% payment against supply of material on receipt & acceptance of material by Railway. (ii) 30% after successful completion of items / equipment. i.e. after carrying out / execution the work to the testing and commissioned operational satisfaction of Railway. Financial progress will be considered for purpose of performance of the contractor.

(b) Advance payment:

No advance payment will be made and no part payment will have made for supply of materials prior to execution the work.

(c) PVC clauses:

PVC clauses will not be implementing on electrical items due to electrical work cost being less value items.

12. RAILWAY MATERIALS PROCLAMATION-HAND RECEIPT(RMP-HR) : Contractor or his representative

always kept a jointly (Railway and Firm's) signed copy of railway materials proclamation-hand receipt (RMP-HR) kept at **site office to show during the** any inspecting of railway authorities at site or to better evolution the further requirement of materials as well as saving statement of materials. Its binding on contractor to sign and kept at site office the Railway materials proclamation-hand receipt (RMP-HR). If contractor deny or failed, its treated escaping form site and its may become cause of slow progress. The tenderer shall be responsible to see that the materials such as cable or any other material supplied by the Administration are utilized for the sole purpose for, which they have been issued to him, failing which, he is liable to be dealt with according to law for any misuse of these commodities by himself, his agents or workmen etc.

13. SECURITY OF MATERIALS:

1. Once the material is handed over to the contractor, the contractor shall be responsible for the security of material irrespective of the fact that the material is kept in Railway premises. The contractor shall make adequate arrangements at site as deemed necessary for guarding the same from the thefts and any sort of damage by outsiders or his labour.
2. The cost of stores lost shall be realized by the Railway out of any payments due to the contractor in this contract or from any other contract under execution by Govt. of India of its enterprises.
3. The Contractor will indemnify all the Stores handed over to him and will execute the Indemnity Bond for this purpose on standard Performa given along with these documents in Annexure-XVII of tender documents. Execution of the Indemnity Bond will precede handing over any material to the Contractor.

14. RETURN OF SURPLUS STORE:

- (a) The stores found to be surplus shall be returned to Consignee by the Contractor with his own staff with immediate effect and proper (-) minus hand receipt will be issued to contractor on receipt of surplus material by the Railway depot staff.
- (b) The contractor shall account for all materials that were issued to him. A register shall be maintained by the contractor, which shall be signed by the Contractor as a token of receipt of materials. All the issued materials shall either be used in the installation or returned to Consignee.

15. RETURN OF RELEASED STORES:

- (a) Released materials shall be handed over to Consignee in systematic manner. Proper care should be taken while releasing & transporting the material at General Stores, or at a place as demanded by the Railways.

- (b) If any extra quantity of Railway materials over and above that shown in the drawing or any extra quantity of Railway materials over the standard scale have been issued to the contractors due to wastage, workmanship or any other reason or if in the opinion of the Engineer, the Railway materials have not been accounted for by the contractor/s, satisfactorily or have not been used on benefited Railway works allotted to the contractor(s), the cost of such Railway materials will be recovered from the contractor.
- (c) In case of Electrical items is issued to the contractor(s) by the Railway either free of cost or on cost for use on works, the supply thereof shall be made in stages, limited to the quantity/quantities computed by the Engineer's representative, according to the prescribed specifications and drawings.
- (d) The Electrical items supplied by Railway in excess of the requirement as above shall be returned at the place of issue, in perfectly good condition by the contractor/s to Railway immediately after completion of work or determination of the contract. If the contractor(s) fails to return the said materials supplied by Railway in excess of the requirements as computed by the Railway according to the specifications and approved drawings, the cost of these materials will be recovered from the contractor(s) @ one and half times the prevailing procurement cost at the time of the last issue or one and half times the current price of the material after completion of the particular phase of the work, whichever is higher plus 7% freight, viz. $\{1.5 \times (\text{Purchase price or current price}) + 7\% \text{ freight, only}\}$. This will be without prejudice to the rights of the Railway to take action against the contractor(s) under the conditions of the contract for not doing/completing the work according to the prescribed specifications and approved drawings.
- (e) Royalty, Octroi and other charges on materials to be supplied by the contractor for construction of work except those to be supplied by the Railway will be borne by the contractor/s.

The main tenderer shall be responsible for acts of commission and omission of the associate electrical contractor. The entire electrical work is to be executed by the associate electrical contractor only and no change shall be allowed in associated electrical contractor during currency of the contract. However in case of any force majeure, competent authority may permit another eligible associate electrical contractor.

16. MAINTENANCE / WARRANTY PERIOD 12 MONTHS:

After the equipment's, system/sub-systems have been installed and commissioned, the contractor shall be responsible for proper maintenance & supervision, free of cost, of the equipment's, system/sub-systems till a period of one year (12th Months) for general electrical works /equipment from the date of commissioning as per final completion report issued by Engineer. In the free maintenance period, contractor will provide all the spares required for such maintenance free of cost.

This free maintenance period will include: -

- i. Maintenance and upkeep of all equipment.
- ii. Attending to break-downs immediately,
- iii. Periodical preventive maintenance.
- iv. Repair/replacement of defective parts.
- v. Operating the existing system satisfactorily.

- (a) The contractor shall give warranty / provide maintenance for satisfactory working of all the type LED lights fittings installed, erected & commissioned by him in this tender, for a period of five year (60th months) from the date of commissioning as per final completion report issued by Engineer.
- (b) For this purpose, contractor shall prepare a maintenance plan and make available the services of maintenance Engineer and Staff who will maintain and supervise the system.
- (c) During this free maintenance period, if any deficiency/fault is noticed in the functioning as a result of any defect in design or manufacture, the same will be rectified by the contractor at his own cost.
- (d) During such rectification if any faulty equipment/modules/ cards/system/ subsystem/part either in hardware or in software or any other form, need replacement or repair, they shall be provided by the contractor free of cost from the set of equipment or modules that the contractor should bring to the site of installation in addition to all the materials to be supplied against this contract.

- (e) Working hours for the system will be twenty-four hours. If any failure takes place, then the maintenance personnel so deputed will immediately attend & rectify the failure. If he fails to rectify the failure within 24 hours from the time of information communicated to him by means of fax, telegram, SMS, email, telephone, WhatsApps or any other method of communication. A penalty will be imposed @ Rs.1000/- per day per system and part thereof after recorded intimation of failure to contractor or his authorized representative, which will be recovered from the payments payable to contractor or from the security deposit or firm may deposit through MR or if penalty is more than SD /PG,, than recovery will be done from contractual bills of this office or this railway or IR. Further if any failure is not rectified after 48 hrs from the time of information communicated to him as above, Railway may proceed to rectify it departmentally or by outsourcing at contractor's risk & cost. Penalty of Rs.5000/- plus cost of such rectification will be deducted from the payments due to the contractor or from the SD/PG payable to the contractor.
- (f) No part refund of Security Deposit shall be permitted during the maintenance period mentioned above.

17. INSTRUCTION FOR COMPLIANCE OF WARRANTY:

- (a) The contractor shall warranty that all materials & equipment's to be supplied and installed as per this tender shall be free from defects and faults in design, material, workmanship and manufacture and shall be of the highest quality and consistent with the established and generally accepted standard for materials of the type ordered and in full conformity with the contract specifications.
- (b) The contractor shall give warranty / provide maintenance for satisfactory working of all the general equipment's & installations erected & commissioned by him in this tender, for a period of one year (12th Months) from the date of commissioning as per final completion report issued by Engineer.
- (c) The contractor shall give warranty / provide maintenance for satisfactory working of all the type LED lights fittings installed, erected & commissioned by him in this tender, for a period of five year (60th months) from the date of commissioning as per final completion report issued by Engineer.
- (d) During the period of Warranty, the contractor shall keep available experienced engineer & technician and necessary equipment to attend to any defective installation. The Contractor shall bear the cost of all modifications, additions or substitutions that may be considered necessary due to faulty material, decision regarding this shall rest with the Engineers
- (e) During the period of Warranty, the contractor shall be liable for the replacement of any equipment & any parts which may be found defective, whether such equipment be of his own manufactured or those of his sub-contractor, whether defect arising from faulty design, material, workmanship or negligence in any manner on the part of the Contractor, at his (Contractor's) own expenses. In case of defect of similar type detected in contractor's equipment & components during the warranty period, the contractor shall replace complete lot of the items irrespective of the fact that whether all such items have failed or not. The Contractor shall bear the cost of repair carried out on his behalf by the Purchaser at site due to urgent requirement. In such a case, the Contractor shall be informed in advance of the repair proposed to be carried out by the Purchaser.
- (f) If it becomes necessary for the contractor to replace or renew any defective portion/s of the system under this clause, the provisions of this clause shall apply to the portion of equipment/component/system so replaced for further period of 12 months from the date of such replacement or renewal or until the end of the warranty period whichever may be later. If any defect is not remedied within reasonable time, the Railway may proceed to do the work at contractor's risk and expense, but without prejudice to any other rights, which the Railway may have against the contractor in respect of such defects.
- (g) The repaired or renewed part shall be delivered and erected on site free of charge to the purchaser. The Railway shall have right for acceptance, rejection of materials at site if the same are not in accordance with the specifications. The terms and conditions of this contract shall also be governed with G.C.C. of Railways.

18. MINIMUM ELIGIBILITY CRITERIA FOR ELECTRICAL WORKS:

(i) FOR ALL ELECTRICAL WORK:

The contractor should have valid Electrical contractor license issued by Govt. and submit along

with tender document. The OEM or his authorized dealer will be exempted from license.

(ii) **FOR NIT VALUE MORE THAN 50 LAKH:** Applicable

SN	Type of work	Similar nature of work for eligibility
1	Supply, installation, testing and commissioning & maintenance of LT/HT network, transformer, switchgears, streetlight, high mast, APFC, solar light/heater/distilled water plant, wiring, illumination, earthing, pumping installation, desert coolers, room air conditioners (WAC/Split) water cooler, room heater, LED signage & other type illuminated signage, UPS/inverters other than coaching stock and DG sets up to 250 KVA.	Any electrical work related to HT/LT installation
2	Supply, installation, testing, commissioning and maintenance of DG sets above 250 KVA excluding Coaching Power cars	Work of DG set & associated works above 250KVA
3	Repair & maintenance of 500 kVA DG Set of Power Car	Annual maintenance of repair and maintenance/overhauling work of DG set of 250 kVA and above for stationary/mobile vans of Railways or Government Agencies or Govt. Public Sector Under taking
4	Supply, installation, testing, commissioning and maintenance of passenger/goods lifts/escalators	Work of lifts/escalators
5	Supply, installation, testing, commissioning and maintenance of fire detection & alarm system	Work of fire detection & alarm system
6	Supply, installation, testing, commissioning and maintenance of building management/automation system	Work of building management/automation system
7	Supply, installation, testing, commissioning and maintenance of fire fighting system of all types	Work of fire fighting system
8	Supply, installation, testing, commissioning and maintenance of centralized heating/air conditioning & air-cooling stationary plants.	Work of centralized air condition/cooling
9	Supply, installation, testing, commissioning, maintenance and addition / alteration/ modification in AC system of coaches.	The OEM of AC plants/RMPU used in coaches or authorised representative of OEM or work related to air conditioning on coaches with proof/ certificate of genuineness from OEM for the components/ equipment used in the system.
10	Hiring of AC coach attendant services	Work experience in providing service personnel/air condition coach attendant (ACCA) in AC coaches of trains
11	Provision of mobile/laptop points in AC/TL	Any electrical work involving

	coaches	Electrical wiring/lighting on coaching vehicle.
12	GPS based passenger information system in AC coaches	Work involving supply, erection and commissioning of GPS based passenger information system in rolling stock
13	Supply, installation & maintenance of water purifiers/ Aqua Guards for hygienic drinking water supply	Work experience in supply, installation and maintenance of water purifiers/aqua guards
14	Design, supply, erection, testing and commissioning of VVVF drive complete along with its panel and other accessories for testing of alternators	Design, manufacturing, supply, erection, testing and commissioning of VVVF drive for any application, along with its panel and other accessories
15	Automation of pumping installations at station in connection with UNDP/GEF funded project on improving energy efficiency in Indian railway.	Supply, erection, testing & commissioning of automatic electronic switching of platform lighting energy management system/automation of pumping installation/automatic street lighting and flood light towers for energy conservation. OR Automation of pumps with the help of GSM/GPRS technology OR Design, supply, installation & commissioning of Energy management system.
16	Design, manufacturing, supply, installation, testing and commissioning of heavy duty passenger elevators (Lifts) with AMC	Design, manufacturing, supply, installation, testing and commissioning of passenger/Luggage elevators (Lifts) with or without AMC
17	Provision of 640 Wp capacity Solar Photo voltaic modules	<p>Definition of Similar work: Meaning of similar work is that any work which consists of “Design, Manufacture, Supply, Erection, Testing and Commissioning of Solar Power Plant with or without AMC”.</p> <p>or “Design, Manufacture, Supply, Erection, Testing and Commissioning of Solar Photovoltaic Lighting Arrangement with or without AMC, shall be considered as a similar work for the purpose of proof of technical experience/competence”.</p> <p>In addition to above, following Eligibility criteria is mandatory in this tender as per specification –The manufacturer from whom the bidder will take the PV modules must possess experience as a manufacturer for at least five years.</p> <p>And The bidder must have experience of Supplying, Installation and Commissioning</p>

		<p>of Solar Photo Voltaic Off-Grid System of Cumulative Capacity 15kWp or above to Railways and/or to any other Government /PSUs in last three years in India.</p> <p>And</p> <p>The bidder must have the facility to integrate the system and should be MNRE Approved System Integrator or their approved channel partners/dealers.</p>
18	Repair reconditioning and upgradation of out of warranty defective different make 25 kW capacity ERRUs to Rev-3 or latest	<p>The similar nature of work will be (i) repair or upgradation of 4.5kW or 25 kW ERRUs or RRUs or</p> <p>(ii) repair or AMC of 25 KVA AC coach inverters of</p> <p>(iii) Repair of pre-cooling battery chargers of 200A capacity or (iv) repair of 4.5 kW or 25 kW alternators or (v) Repair or AMC of RMPU along with control panel of AC coaches.</p>
19	Comprehensive Maintenance Contract for Fire Fighting system & Fire Alarm System.	<p>Definition of Similar work:</p> <p>Installation or maintenance work of Fire Detection and Alarm system & work of Fire Fighting System.</p>
20	33/11 kV Sub-station and allied work.	<p>Definition of Similar work:</p> <p>Design, manufacture, supply, erection, testing and commissioning of 33 KV or above substation with HT panel complete or a part of it with or without APFC panel.</p>
21	Supply, Installation, Testing and commissioning of web based energy monitoring and control system.	<p>Definition of Similar work:</p> <p>Supply, erection, testing and commissioning of automatic electronic switching of platform lighting energy management system / automation of pumping installation/ automation of pumping installation/automation street lighting and flood light towers for energy conservation.</p> <p>Or</p> <p>Automation of pumps with the help of GSM technology</p> <p>Or.</p> <p>Design, supply, installation and</p>

		commissioning of Energy management system.
22	Display cum-announcement system on important mail/express trains on Indian Railways	<p>Similar nature of work would mean the work of “Passenger information System” or “Display cum announcement system” in coaching trains of Indian Railways as per RDSO specification no. RDSO/PE/SPEC/AC/0087-2008 (Rev.1)</p> <p>Or</p> <p>“RDSO approved sources for passenger information system for AC and non AC coaches as per RDSO specification no. RDSO/PE/SPEC/AC/0087-2008(rev.1)” will also be eligible, subject to meeting the limits of eligibility criteria.</p>
23	Out sourcing of Escorting activity (Duties of ACCI & Electrical supervisor) & Trip maintenance of AC coaches	<p>Any of the approved sources of RMPU and its control panel as per latest RDSOs vendor directory.</p> <p>or</p> <p>Maintenance and escorting activities of Electrical equipment in AC coaches.</p> <p>or</p> <p>Repair and maintenance of air conditioning /DG sets/power equipment in coaches/rolling stock/power cars</p> <p>Or</p> <p>Repair and maintenance of central air conditioning units/stationary AC units /chillers/water coolers.</p>
24	Manning, operation & cleaning of lifts/Elevators	<p>The contractor should have executed any electrical work for maintenance /manning/operation of lifts/ elevators/ escalators/ travellers.</p> <p>Or</p> <p>The contractor should have executed the work for manning / operation of any lift/ elevator/ escalator/travellers.</p> <p>The work must have been carried out in any of the following organizations: -</p> <p>(a) Central govt. department or state govt. department.</p> <p>Or</p>

		(b) Central govt. PSUs or State govt. PSU.
25	Manning, Operation & cleaning of Escalators/ Travellators	<p>The contractor should have executed any electrical work for maintenance /manning/operation of lifts/ elevators/ escalators/ travellators.</p> <p>Or</p> <p>The contractor should have executed the work for manning / operation of any lift/ elevator/ escalator/travellators.</p> <p>The work must have been carried out in any of the following organizations: -</p> <p>(c) Central govt. department or state govt. department.</p> <p>Or</p> <p>(d) Central Govt PSUs or State govt. PSU.</p>
26	Daily, FNE, Monthly maintenance including cleaning activity of fans, Lights, Batteries and other electrical equipment of TL Coaches.	<p>The firm should have carried out the work of AMCoF Electrical equipment in TL/SGAC/EOG AC coaches.</p> <p>Or</p> <p>The firm should have carried out repair/rehabilitation of electrical equipment in TL/SGAC/EOG AC coaches</p> <p>Or</p> <p>The firm should have carried out electrical modification work including wiring in TL/SGAC/EOG AC coaches</p> <p>Or</p> <p>The firm should be RDSO/RCF/ICF approved sources as per latest Master list having supplied electrical equipment of TL/SGAC/EOG AC coaches.</p> <p>Or</p> <p>The tenderer should have executed any work relating to fitment of any of the electrical fitting with or without supply of the fitting in TL/AC/EMU/MEMU coaches in Division/Workshops/Production units.</p>

27	Provision of IOT devices/ Intelligent Field Devices (IFDs) for monitoring & Control (Indian Railways Native IOT based Yield Analysis Telemetry, Recording and Control-IRNIYANTRAC) of electrical general assets like pumps, platform lighting, street lighting, lifts, escalators, substation etc.	Supply, installation, testing and commissioning of IOT devices/ Intelligent Field Devices (IFDs) for web based monitoring & Control of electrical general assets like pumps or platform lighting or street lighting or lifts or escalators or substation.
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19. Use of Railway Land:

Use of Railway land required by the contractor(s) for constructing temporary offices, quarters, hutments etc. for the staff and for storing materials etc. would be permitted to him/them free of charges by Railway, if available. The location of these offices, hutments, stores etc., will be subject to the approval of the engineer or his authorized representative. The land will be restored to Railway by the contractor(s) in the same condition as when taken over or in vacant condition as desired by the engineer, after completion of the work or at any earlier day, as specified by the Engineer. The failure to do so will make the contractor(s) liable to pay the cost incurred by the Railway for getting possession of land. The tenderer(s) shall also acquaint himself /themselves with the availability of land, working space for his/their works etc. The Railway will not acquire any land for the purpose of movement of vehicles of the Contractor/s for executing the work by the contractor/s.

20. Use of Private Land

The Contractor will have to make his/their own arrangements for use of private land, outside Railway limits for due fulfillment of contract or for borrow pits, approaches, etc., directly with the land owners or local authority and to pay such rents if any as are payable as maybe mutually agreed upon between them.

21. Figures, Dimensions, etc.

Figures, dimensions and drawings shall supersede measurements by scale and drawing to larger scale shall take precedence over those to a smaller scale. Special dimensions or directions in the specification shall supersede all else.

22. Plea of Custom

The plea of custom prevailing will not on any account be permitted as excuse for an infringement of any of the conditions of the contractor specifications.

23. Notice to Public Bodies

The Contractor(s) shall give to the municipality, police and other authorities all notices that may be required by law and obtain all requisite licenses for temporary obstructions, enclosures and pay all fees, taxes and charges, which may be leviable on account of his operations in executing the contract. He should make good any damage to adjoining premises whether public or private and supply and maintain any lights, etc., required at night.

24. Damage by Accident, Floods or Tides

The contractor shall take all precautions against damage from accident, floods or tides. No compensation will be allowed to the contractor for his plant or part or material lost or damaged by any cause whatsoever. The contractor shall be liable to make good the damages to any structure or part of structure, plant or material of every description belonging to the administration lost or damaged by any cause during the course of the contractor's work.

The administration will not be liable to pay to the contractor any charges for rectification or repairs to any damage which may have occurred from any cause, whatsoever, to any part of the new/existing structure, during construction.

25. SERVICE ROADS

The Contractor/s will be permitted to make use of existing service roads, or service roads constructed by the Railway for its use free of cost. New service roads required by the contractor/s either near the work site or elsewhere within or outside railway limits for carriage of materials or for any other purpose whatsoever, will have to be constructed and maintained by the contractor/s at his/their own cost. For the purpose of constructions of service roads on railway land, permission will be given free of any charge. If any land other than railway land is necessary to be acquired or to be entered upon, permission to enter in the land will have to be arranged by the contractor/s at his/ their cost. The contractor/s will not refer any claim, whatsoever on this account. The Railway, however, reserves the right to make use of such service roads as may be constructed by the contractor/s without payment of any charges.

26. EMERGENCY WORKS

In the event of any accident or failure occurring in, on or about the work or arising out of or in connection with the construction, completion or maintenance of the works, which in the opinion of the Engineer requires immediate attention, the Railway may bring its own workmen or other agency execute or partly execute the necessary work or carry out repairs if the Engineer considers that the contractor/s is/are not in a position to do so in time and charge the cost thereof, which will be determined by the Chief Electrical Engineer/ Chief Administrative Officer (C), North Western Railway, to the contractor.

27. INSTRUCTION / DIRECTIVES OF RAILWAY OFFICIALS:

(a) INSTRUCTIONS / DIRECTIVES OF THE ENGINEER'S REPRESENTATIVE.

The contractor shall at all times, execute the contract work only in the presence and under the supervision of the Engineer's Representative or a Railway employee specifically appointed on his behalf. No work under the contract shall, therefore, be commenced by the contractor without the express permission of the Engineer's representative.

The contractor shall always execute the work under this contract in strict compliance with the instructions/directives by the Engineer's representative. Any act of non-compliance with the instruction/directives issued by the Engineer's representative shall be considered as a default of the contractor where after the Railway shall be free to take further appropriate action as provided in the contract for dealing with such defaults of the contractors. The decision of the Engineer-in-charge whether there has been an act of non-compliance with the instruction/directives of the Engineer's representative for the purpose of this clause shall be final and conclusive.

The instructions/directives by the Engineer's representative shall not, however, absolve the contractor of his responsibility or reduce his responsibility in any manner whatsoever in regard

to maintaining at all times the safe working conditions at the work site.

(b) NON-COMPLIANCE WITH THE INSTRUCTIONS/DIRECTIVES OF THE ENGINEER'S REPRESENTATIVE.

The contractor shall always comply with the instructions/directives issued by the Engineer's representative from the time to time. In the event of any non-compliance with such instructions/directives, apart from and in addition to other remedies available to the Railway as specified herein above the Engineer's representative may employ at the works Railway's workmen with necessary equipment as considered appropriate and adequate by him to provide the requisite conditions for the safe and unhampered movement of Railway traffic. The decision of the Engineer's representatives in regard to the need of appropriateness and adequacy of the deployment of the Railway Workmen with necessary equipment shall be final and conclusive. When the Railway workmen with necessary equipment are deployed in the above manner, recovery at the following rate shall be made from the contractor's dues under this contract or any other money of the contractor available with the Railway under this contract. The recovery for the total Railway Workmen Hours employed at the **rate of Rs. 100/- (Rupees Hundred only) per Workmen-Hour** irrespective of the type and grade of the Railway Employee actually employed. The aggregate period of the Workman-Hours for the above recoveries shall be reckoned from the time the Railway Workmen are actually deployed at the work site till the work is completed to the satisfaction of the Engineer's Representative whose decision in this regard shall be final and conclusive.

During the above mentioned period of suspension of work, the contractor shall not in any manner attempt to carry out any work at the work site. Any such attempt of the contractor shall be deemed to be an unauthorized work on the work site. For such acts, the contractor shall then be liable for further appropriate action under the relevant provisions of the Indian Railway Act.

28. SHIFTING OF ELECTRICAL/TELEGRAPH WIRES.

In some stretches, high-tension grid towers /electric telegraph/telephones wires or posts etc. are to be shifted. It is expected that the electric lines/towers will be shifted in reasonable time strictly as per approved plan by Engineer based on extant Rules & Regulations but in case, there is any delay on this account suitable extension in date of completion will be considered and given to the contractor for only the effected portion and no compensation whatsoever in this respect or due to the delay thus caused will be payable and contractor has to adopt such methods of execution of earthwork so as not to cause any damage to existing structure lines etc.

29. HANDING OVER OF SITE FOR WORK.

The entire land required for this work is available. However, Railway may not hand over the entire land required for completion of this work for making bank/cutting or excavation to the contractor(s) due to any unavoidable reasons. Land may be handed over in different stretches, which may not be continuous. Contractor(s) will be required to carry out the work in available stretches. If some stretch of land cannot be handed over to the contractor for borrowing earth or making bank/cutting within the contract period then suitable extension will be granted only for the affected portion without any payment of extra claim to the contractor.

30. Accident/Natural calamities: -

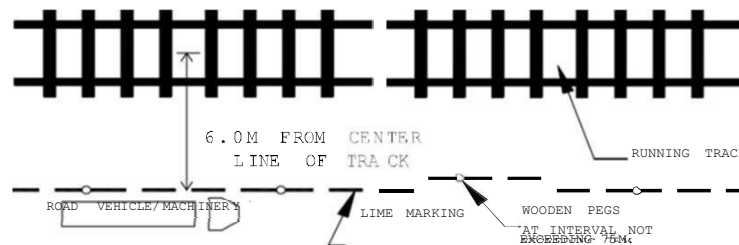
Vehicle and equipments of the contractor can be drafted by Railway Administration in case of Accidents/Natural calamities involving human lives. For payment purpose, the item may be operated as New Non-Schedule (NS Item) as per existing norms and powers delegated. Contractor may submit list of vehicles and equipment available with him.

31. Safe working of contractors (Extract of para 826 of IRPWM) :- A large number of men and machinery are deployed by the contractors for track renewals, gauge conversions, doublings, bridge rebuilding, railway electrification etc. It is therefore essential that adequate safety measures are taken for safety of the trains as well as the work force. The following measures should invariably be adopted.

- (i) The contractor shall not start any work without the presence of railway supervisor at site.
- (ii) Wherever the road vehicles and/or machinery are required to work in the close vicinity of railway line, the work shall be so carried out that there is no infringement to the Railway's schedule of dimensions. For this purpose, the area where road vehicles and/or machinery are required to ply, shall be demarcated and acknowledged by the contractor. Special care shall be taken for turning/ reversal of road vehicles/machinery without infringing the running track. Barricading shall be provided wherever justified and feasible as per site conditions.
- (iii) The look out and whistle caution orders shall be issued to the trains and speed restrictions imposed where considered necessary. Suitable flagmen/detonators shall be provided where necessary for protection of trains.
- (iv) The supervisor/workmen should be counseled about safety measures. A competency certificate to the contractor's supervisor as per Performa annexed shall be issued by Engineer or his authorized representative, which will be valid only for the work for which it has been issued.
- (v) The unloaded materials for tender work after unloading from track should be kept clear off moving dimensions and stacked as per the specified heights and distance from the running track.
- (vi) Supplementary site specific instructions, wherever considered necessary shall be issued by the Engineer in Charge.

32. PLYING OF ROAD VEHICLES AND WORKING OF MACHINERIES CLOSE TO RUNNING TRACKS

- (i) Normally, the road vehicles shall be run or machinery shall be worked so as not to come closer than 6.0m from centre line of nearest running track.
- (ii) The land strip adjacent to running tracks, where road vehicle is to ply or machinery is to work, shall be demarcated by lime in advance in consultation with the Railway's Supervisor. Wooden pegs at



interval not exceeding 75mts shall be provided along the line marking as permanent marks. The road vehicles shall ply or machinery shall work so as not to infringe the line of demarcation.

- (iii) If a road vehicle or machinery is to work closer to 6.0m due to site conditions or requirement of work, following precautions shall be observed.
 - a. In no case the road vehicle shall run or machinery shall work at distance less than 3.5m from centerline of track.

- b. Demarcation of land shall be done by bright colored ribbon/nylon chord suspended on 75cm high wooden/bamboo posts at distance of 3.5 m from centre line of nearest running track.
 - c. Presence of an authorized Railway's representative shall be ensured before plying of vehicle or working of machinery.
 - d. Railway's Supervisor shall issue suitable caution order to Drivers of approaching train about road vehicles plying or machineries working close to running tracks. The train drivers shall be advised to whistle freely to warn about the approaching train. Whistle boards shall be provided wherever considered necessary.
 - e. Lookout men shall be posted along the track at a distance of 800m from such locations who will carry red flag and whistles to warn the road vehicle/machinery users about the approaching trains.
- (iv) On curves where visibility is poor, additional lookout men shall be posted. If vehicle/machinery is to be worked closer to 3.5m from running track. Under unavoidable conditions, if road vehicles is to ply or machinery is to work closer to 3.5m due to site conditions or requirement of work, following precautions shall be observed:
- a. Plying of vehicles or working of machinery closer to 3.5m of running track shall be done only under protection of track. Traffic block shall be imposed wherever considered necessary. The site shall be protected as per provisions of Para No. 806 & 807 of P-Way Manual as case maybe.
 - b. Presence of a Railway's Supervisor shall be ensured at worksite.
 - c. Railway's Supervisor shall issue suitable caution order to Drivers of approaching train about road vehicles plying or machineries working close to running tracks. The train drivers shall be advised to whistle freely to warn about the approaching train.
- (v) Precaution to be taken while reversing road vehicle alongside the track.
The location where vehicle will take a turn shall be demarcated duly approved by Railway's representative. The road vehicle driver shall always face the Railway track during the course of turning/reversing his vehicle. Presence of an authorized Railway representative shall be ensured at such location.
- (vi) Road vehicle shall not be allowed to run along the track during night hours generally. In unavoidable situations, however, vehicles shall be allowed to work during night hours only in the presence of an authorized Railway's representative and where adequate lighting arrangements are made and where adequate precautions as mentioned earlier have been ensured.
- (vii) Road vehicles/machinery/plant etc. when stabled near running tracks shall be properly secured against any possible roll off and always be manned even during off hours.

33. EXECUTION OF WORKS CLOSE TO OR ON RUNNING LINES

- (i) Any work close to or on running tracks shall be executed under the presence of a Railway's Supervisor only.
- (ii) Precaution to be taken to ensure safety of trains while execution of work close to the running line or on running lines.
 - a. Such works shall be planned and necessary drawings particularly with regard to infringement to moving dimensions shall be finalized duly approved by competent authority before execution of work.

The work shall be executed only as per approved procedure and drawings.

- b. All temporary arrangements required to be made during execution of work shall be made in such a manner that moving dimensions do not infringe.
- c. Suitable speed restriction shall be imposed or Traffic block shall be ensured as required.
- d. The site shall be protected as per provisions of Para No. 806 & 807 of P-Way Manual as case may be
- e. Necessary equipment for safety of trains during emergency shall be kept ready at site.

(iii) Precaution to be taken to ensure safety of electrical/signal/ telephone cables while excavating near tracks.

- a. Particular care shall be taken to mark the locations of buried electrical/signal/telephone cables on the plans jointly with S & T/Electric supervisor and also at site so that these are not damaged during excavation.
- b. Copy of the cable plan should be given to the contractor's authorized representative before handing over the site to start the work.
- c. Due care shall be taken to ensure that any part of the equipment or machinery or temporary arrangement does not come close to cables while working.

(Ref: JPO issued by Railway Board vide letter no. 2003/Tele/RCIL/1 pt. IX dated 24.06.2013 (Telecom circular no. 17/2013) for undertaking digging work in the vicinity of signalling, electrical and telecommunication cable will be followed during the execution of work.)

(iv) Precaution to be taken during execution of works requiring traffic blocks.

- a. Any work, which infringes the moving dimensions, shall be started only after the traffic block has been imposed.
- b. Before closing the work, the track shall be left with the proper track geometry so that the trains run safely.
- c. After completion of work the released sleeper and fittings should be properly stacked away from the track to be kept clear of moving dimensions.
- d. Block shall be removed only when all the temporary arrangement, machineries, tools, plants etc. have been kept clear of moving dimensions.

(v) Precaution to be taken during execution of works during night.

The work close to running line, generally, shall be carried out only during day hours. At locations, however, where night working is unavoidable, proper lighting arrangement should be made and all safety aspects should be strictly observed. The engineering indicator boards shall be lightened during night hours as per the provisions of P-Way Manual. The staff deputed for night working should have taken adequate rest before deploying them in night shift. We can specify duration of night shift from 20.00 hrs to 04.00 hrs. All other safety precautions applicable for daytime work should be strictly observed during night working.

(vi) Precautions to be taken to ensure safety of workers while working close to running lines.

- a. Necessary lookout men with red flags and whistles shall be provided to warn the workmen about the approaching train.
- b. Railway's supervisor shall issue suitable caution order to Drivers of approaching train for whistling to warn the workers about the approaching train. Whistle boards shall be provided wherever considered necessary.
- c. A "First aid kit" shall always be kept ready at site.

(vii) Precaution shall be taken for safety of public or passengers, while executing works at locations, used by passengers and public.

The worksite shall be suitably demarcated to keep public and passengers away from work area. Necessary signage boards such as "Work in progress. Inconvenience is regretted" etc. shall be provided at appropriate locations to warn the public/ passengers. Adequate lighting arrangement of worksite wherever required shall be done to ensure safety of public/passengers during night.

- (viii) Precaution to be taken before stacking materials alongside the track to ensure that safety of trains is not affected.

The following precautions shall be taken before stacking the materials along the track for stacking of Electric poles, Cables , OHE masts, Contact wires, Catenary wires etc.

- a. The sites for material stacking should be selected in advance in such a manner to ensure that no part of the material to be stacked is infringing to the Standard Moving Dimensions. A plan of proposed stacking locations be made and signed jointly by an authorized Railway's representative and contractor's representative.
 - b. The selected locations shall be marked by lime in advance.
 - c. Presence of an authorized Railway's representative while unloading and stacking shall be ensured.
 - d. The materials shall be stacked in such a height so as to not to infringe SOD in case of accidental roll off.
- (IX) Precautions to be taken during working in RE areas – Necessary precautions to be taken during working in electrified / under electrification sections by contractor or his representative/staff (Ref: Elect. HQ office letter no. EL/Safety/2/power/Pt. III dated 20.11.2013.

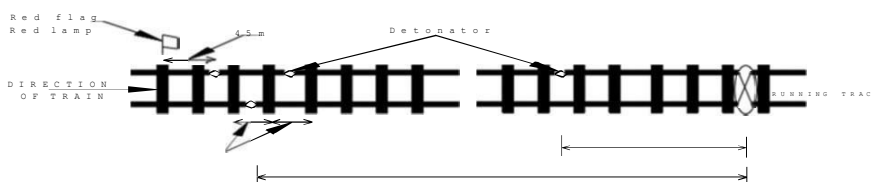
34. PROTECTION OF TRACK DURING EMERGENCY

- (i) **Action to be taken when a contractor's supervisor or vehicle operator apprehends any unusual circumstances likely to infringe the track and endanger safe running of trains.**

At any time if a contractor's supervisor or vehicle operator observes any unusual circumstances likely to infringe the track and apprehend danger to safe running of track, he shall take immediate steps to advise a Railway official of such danger and assist him in protection of track.

The track shall be protected as under. One person shall immediately plant a red flag (red lamp during night) at the spot and proceed with all haste in the direction of approaching train with a red flag in hand (red lamp during night) and plant a detonator on rail at a distance of 600m from the place of obstruction of BG track (400m for MG track) after which he shall further proceed for not less than 120 0m from the place of obstruction from BG track (800m for MG track) and plant three detonators at 10m apart on rails. After this he shall display the red flag (red lamp during night) at a distance of 45m from the detonators.

Attempts shall also be taken to send an advice to nearest Railway station about the incident immediately.



- (ii) Action to be taken if train is seen approaching to site of danger and there is no time to protect the track as per guidelines mentioned above?
- (iii) In such a case the detonators shall be planted on rails immediately at distance away from place of danger as far as possible and attention of driver of approaching train shall be invited by whistling, waving the red flag vigorously, gesticulating and shouting.
- (iv) What action shall be taken if more than one track is obstructed?
 - a. In case of single line protection as above shall be done in both the directions from place of danger.
 - b. In case of double line or multiple lines, if other tracks are also obstructed, the protection as above shall be done for other track also.
 - c. The protection shall be done in that direction and on that track first on which train is likely to arrive first.
 - d. The Contractor's Supervisors, Operators and lookout men shall be properly explained about the direction of trains on running tracks.
- (v) Equipment required for protection of track.
Minimum complement of protection equipment i.e. 10 detonators, 4 red hand flags, 4 red hand lamps, 4 banner flags and whistles etc. shall always be kept ready at worksites for use in case of emergency. Railway will arrange to provide detonators, whereas Contractor shall arrange other equipment at his own cost.
- (vi) Arrangement of lookout men and competency required for lookout man to warn labour about approaching train.
 - a. Contractor will provide lookout men.
 - b. The lookout men shall be properly trained in warning to staff at worksite about approaching train.
 - c. Only those lookout men shall be provided at site who have been issued with a competency certificate by the Railway's Supervisor.
 - d. In case, it is felt necessary to provide lookout men by Railway, the charges for the same as fixed by Railway Administration shall be recovered from Contractor.

35. Training to Supervisors and Operators of Contractor.

1. The Supervisors and Operators of the contractor proposed to be deployed at work site, which is close to the running track, shall be imparted mandatory training by the Railway at site free of cost about the safety measures to be adopted while working in the vicinity of running track. Engineer-in charge of the work shall decide the scale, extent & adequacy of training. In case training is imparted at a recognized Railway training institute, the charges for the same, as decided by Railway, shall be recovered from contractor. A competency certificate to this effect to the individual Supervisor/Operator shall be issued as given below, by a Railway Officer not below the rank of Assistant level. No Supervisor/Operator of the Contractor shall work or allowed to work in the vicinity of running track who is not possession of valid competency certificate.

All the labour, materials, tools, plants etc. except detonators, required for ensuring safe running of trains shall be provided by Contractor at his own cost. Wherever lookout men are provided by Railway, charges at the rate of Rs. 500/- per man day shall be recovered from Contractor.

Competency Certificate

Certified that Shri _____ Supervisor/Operator of M/s. _____ has been trained and examined in safety measures to be followed while working in the vicinity of running railway track for the work _____. His knowledge has been found satisfactory and he is capable of

supervising the work safely. This certificate is valid only for the work mentioned in this certificate only.

Signature and designation of the officer

36. JOINT PROCEDURE ORDER FOR UNDERTAKING DIGGING WORK IN THE VICINITY OF UNDERGROUND SIGNALLING, ELECTRICAL & TELECOMMUNICATION CABLES

Following joint procedure shall be followed while carrying out any digging work near to existing signaling & telecommunication and electrical cables so that the instances of cable cut due to execution of works can be controlled and minimized.

Before taking up any digging activity on a particular work by any agency, concerned Sr. DSTE and Sr. DEE/.../Dy.CEE/... of the section shall be approached in writing by contractor for permitting to undertake the work. Sr. DSTE and Sr. DEE/.../Dy.CEE/..., after ensuring that the concerned executing agencies (contractor) have fully understood the S&T and Electrical cable route plan, shall permit the work in writing within 7 days of the request made for the same.

After getting the permission from S&T and/or Electrical department as the case may be, the relevant portion of the cable route plan shall be attached to the letter through which permission is issued to the contractor for commencement of work and ensuring that the contractor have fully understood the cable route plan and precautions to be taken to prevent damage to the underground cables. The contractor shall be asked to study the cable plan and follow it meticulously to ensure that the safety of the cable is not endangered.

On receiving the above information from contractor, SE/Sig. or SE/Tele or SE/ Electrical (Const., TRD or G) shall visit the site on or before the date of taking up the work and issue permission to the contractor to commence the work after checking that adequate precautions have been taken to avoid the damage to the cables. The permission shall be granted within 3 days of submission of such request.

The name of the contractor, his contact telephone number, the nature of the work shall be notified in the Electrical & S&T control as soon as the concerned S&T / Electrical officials issue the letter authorizing commencement of work to the contractor. Control / Test room shall be given copies. Control/Test room shall collect any further details from the Engineering control and shall pass it on to S&T/Railtel & Electrical officials regularly. In case the supervisors of concerned departments do not turn up on the day as advised in terms of Para 39.3 above, the work of contractor shall not be stopped on this account.

In all the sections where major projects are to be taken up/going on, Electrical department shall deploy their officials to take preventive/corrective action at site of work. As regards other departments, the officials may be deputed on need basis.

The works of excavating the trench and laying of the cable should proceed in quick succession, leaving a minimum time between the two activities.

In case damage is caused to OFC/Quad cable/Electrical cable/Signaling cable during execution of the work, the contractor is liable to pay a penalty for damaging the cable. Penalty shall not be levied in case of the following: -

- (i) Detailed cable route plan is not provided by concerned department or cable is not protected as per laid down procedures.

- (ii) The alignment of the cable does not tally with the information provided to the contractor.
- (iii) The cable depth is found to be less than 800 mm from normal ground level.
- (iv) No representative of S&T/Electrical department was available at site guarding the cables on the fixed pre-determined date and time.

Penalty to be imposed for damages to cable shall be as under:-

Cable damaged	Penalty per location
Only Quad cable or Signaling cable	Rs. 1.0 Lakh
Only OFC	Rs. 1.25 Lakh
Both OFC & Quad	Rs. 1.5 lakh
Electrical Cable	Rs. 1.0 Lakh

In case of damage to OFC, RailTel should be paid 5/6th of the penalty recovered. RailTel shall raise demands on the S&T department in this regard.

All types of Signaling & OHE bonds i.e. rail bond, cross bond and structure bond shall be restored by the contractor with a view to keep the rail voltage low to ensure safety of personnel.

S&T cable and Electrical cable route plan should be prepared by the concerned S&T and Electrical officers respectively and go to approved before undertaking the work. The completion cable route plan should be finalized block section by block section as soon as the work is completed. All cable laying works shall be executed as per laid down technical specifications, such as protection measures/ protective cover, compaction of refilled material etc. (Ref: JPO issued by Railway Board vide letter no. 2003/Tele/RCIL/1 pt. IX dated 24.06.2013 (Telecom circular no. 17/2013) for undertaking digging work in the vicinity of signaling, electrical and telecommunication cable will be followed during the execution of work.

SCHEDULE OF RATES & TECHNICAL SPECIFICATIONS

NORTH WESTERN RAILWAY	
Schedule of Rates	
Tender No.: EL/JP/03R/2026-27	Date of opening: 10.07.2026
Details of sanctioned estimate: NWR-JP0ENGG(W722)/60/2025,dt. 02.07.2025; NWR-JP0ENGG(W722)/25/2025,dt. 11.08.2025; NWR-JP0ENGG(W722)/72/2024,dt. 16.10.2024; NWR-JP0ENGG(W722)/71/2024,dt. 17.10.2024; NWR-JP0ENGG(W722)/138/2025,dt. 26.07.2025; NWR-JP0ENGG/40/2025, dt.19.02.2026; (PH-51)	
Name of work: Electrical work in connection with [1] Replacement of old/Dilapidated quarters at RGS, SIKR, JJN stns Type-II (20units), [2] Construction of new quarters for staff/officers at NNL,NIP,DBLA of Type-II(08 Units),Type-III(05 Units)& Type-IV(02 Units)=15, [3] Providing 15 units Type II quarters in lieu of old abandoned quarters for Gang No. 39,40 & 42 in SIKAR - LHU section, [4] Providing 8 units Type II quarters in lieu of old abandoned quarters for Gang No. 27 & 28 in JP- RGS section, [5] Replacement of old/Dilapidated quarters at FL,NRI,KSG stns Type-II(13 units),Type-III(05Units)&Type-IV(02 Units) =20 units, [6] Provision of Staff quarters at old KSG Station Type-2(08Nos) ,Type-III(04Nos) & Type-IV(01Nos) Total=13 Nos	

NS	Description	Ut	Qty	Rate	Total
1 NS	Supply of material and wiring of LP/TP/FP/Ex.Fan point with 1.5sqmm PVC single core multi-stranded copper wire insulated concealed in stone/brick masonry wall in19/20 mm PVC conduit with 1.5sqmm PVC wire insulated copper for earth wire 1-way switch 5/6A and good quality three plate ceiling rose including connection as per spec	No.	355	343.11	121804.05
2 NS	Supply of material and wiring of LP/TP/FP/Ex.Fan point with 1.5sqmm PVC single core multi-stranded copper wire insulated concealed in stone/brick masonry wall in19/20 mm PVC conduit with 1.5sqmm PVC wire insulated copper for earth wire 1-way/2-way switch 5/6A as required and good quality ceiling rose including connection (MODULAR) as per spec	No.	1483	333.55	494654.65
3 NS	Supply and fixing of 5/6A 5/6-pin socket with switch on existing MS board as per spec	No.	115	25.12	2888.80
4 NS	Supply and fixing 5/6A plug 5-pin 230V with switch, board and wiring with 2.5sqmm PVC CU cable as per spec.	No.	660	180.78	119314.80
5 NS	Supply and fixing of 15/16A 6-pin power socket with switch on new MS board as per spec	No.	184	58.87	10832.08
6 NS	Supply and fixing 15/16A power socket with switch on flush type sheet metal box and connection as per spec	No.	767	179.84	137937.28
7 NS	Supply and fixing of ceiling fan electronic regulator as per spec	No.	69	149.31	10302.39
8 NS	Supply and fixing ceiling of fan regulator electronic type 5-step as per spec	No.	242	299.17	72399.14
9 NS	Supply and fixing of MS board in recessed size 100x100x50mm as per spec	No.	56	23.33	1306.48
10 NS	Supply and fixing of MS board in recessed size 175x100x50mm as per spec	No.	184	51.32	9442.88
11 NS	Supply and fixing 12 module plate for fixing of switches and sheet metal box of good quality concealed fixing of MS/PVC	No.	158	235.43	37197.94
12 NS	Supply and fixing 8 module plate for fixing of switches and sheet metal box of good quality concealed fixing of MS/PVC	No.	245	213.76	52371.20
13 NS	Supply and fixing 6 module plate for fixing of switches and sheet metal box of good quality concealed fixing of MS/PVC	No.	52	164.13	8534.76
14 NS	Supply and fixing 4 module plate for fixing of switches and sheet metal box of good quality concealed fixing of MS/PVC	No.	169	122	20618.00
15 NS	Supply and fixing 2 module plate for fixing of switches and sheet metal box of good quality concealed fixing of MS/PVC	No.	92	94.03	8650.76
16 NS	Wiring of sub-main with 2x2.5 sqmm PVC insulated, single core, multi-stranded copper wire in PVC conduit concealed and 1.5sqmm PVC insulated, single core, multi-stranded copper wire for earth wire as per spec	M	7910	65.5	518105.00
17 NS	Wiring of sub-main with 2x4 sqmm PVC insulated, single core,	M	7250	111.36	807360.00

	multi-stranded copper wire in PVC conduit concealed and 1.5sqmm PVC insulated, single core, multi-stranded copper wire for earth wire as per spec				
18 NS	Wiring of sub-main with 2x6 sqmm PVC insulated, single core, multi-stranded copper wire in PVC conduit concealed and 2.5sqmm PVC insulated, single core, multi-stranded copper wire for earth wire as per spec	M	3270	114.07	373008.90
19 NS	Fixing of LED light fitting with PVC insulated, multi-stranded copper wire for connection as per site requirement as per spec	No.	394	61.54	24246.76
20 NS	Fixing of ceiling fan with clamp, hooks and down rod as per requirement and connection as per spec	No.	311	195.7	60862.70
21 NS	Supply and Providing GI Pipe Earthing of 4meter length as per spec	No.	137	1600.54	219273.98
22 NS	Supply and fixing of PVC meter box with 2 Nos. single pole MCB 6-32A as per spec.	No.	86	748.7	64388.20
23 NS	Supply and fixing of electronic energy meter 0-30A or above as per spec.	No.	86	1366.22	117494.92
24 NS	Supply and fixing of Metal Clad Plug Socket 20A single phase with 32A MCB including fixing and sheet metal enclosure box with one 20A plug top (Ray roll type) to be supplied with board as per spec.	No.	320	708.55	226736.00
25 NS	Supply, fixing, testing and commissioning of RCBO 25A, double pole, 30mA with Earth leakage, overload and short circuit protection as per spec	No.	86	1944.68	167242.48
26 NS	Supply, fixing, testing and connecting of Distribution Board with incoming 32A, single phase, DP MCB and outgoing 8Nos. single pole MCB 6-16A as per spec	No.	86	2567.67	220819.62
27 NS	Supply & fixing bell with switch and wiring by 1.5sqmm PVC insulated multi-stranded copper wire with board as per spec	No.	93	246.71	22944.03
28 NS	Supply and laying of HDPE pipe conforming to IS 4984:1995 50mm dia wall thickness 3 mm PN-6 under the road/air. The work involves laying of HDPE pipe.	M	16905	89.31	1509785.55
29 NS	Digging and filling of trench size 0.4x1.2 mtr as per spec (trench work may be on kuchha/pucca and land and all type of soil as per site requirement and without protective layer of brick) surface of trench shall be made good in all respect and satisfaction of site engineer	M	17555	37.16	652343.80
30 NS	Laying of LT/HT Cable IN AIR / Pipe/ Wall/tray as per spec	M	24450	18.33	448168.50
31 NS	Supply, fixing and connecting modular type exhaust fan 225/250mm as per spec	No.	105	812.45	85307.25
32 NS	Supply and fixing of 3 phase electronic energy meter 0-40A with meter box and 4 pole MCB 63A as per spec	No.	5	6389.76	31948.80
33 NS	Supply, fixing, testing and commissioning of RCBO 63A, Four pole, 30mA with Earth leakage, overload and short circuit protection as per spec	No.	22	3006.95	66152.90
34 NS	Supply, fixing, testing and commissioning of Distribution Board double door, 3-phase and neutral with incoming 63A 4-pole MCB and outgoing 12Nos. MCB 6-32A single pole as per spec.	No.	22	4540.45	99889.90
35 NS	Supply, testing and commissioning of LT distribution panel 2x250A MCCB incoming and 4x100A MCCB with A&V meter selector switch indications etc as per spec	No.	5	68726.33	343631.65
36 NS	Supply, fixing, testing and commissioning of fabricated Feeder Pillar distribution box made of MS sheet 1.6mm thick size 600x300x600mm with suitable MS stand Copper bus bar of 200A capacity and 2x63A MCB 4 pole as per spec	No.	33	4221.15	139297.95
37 NS	Supply and fixing of octagonal pole 5meter long, Hot dip galvanized with foundation, base plate with fixing of 1No. arms 1000mm for the fittings including smart pack junction box with 6A MCB and terminals as per spec.	No.	88	7685.05	676284.40
38 NS	Supply, fixing testing and commissioning of Astronomical timer multifunctional digital as per spec	No.	18	9699.55	174591.90
39 NS	Supply and laying of Electrical copper cable 2.5 sqmm/ 3 core	M	620	73.08	45309.60
40 NS	Supply and laying of HDPE pipe conforming to IS 4984:1995,	M	2000	107.41	214820.00

	75/80mm dia wall thickness 3 mm PN-4 under the road/air. The work involves laying of HDPE pipe.				
41 NS	Horizontal Directional Drilling (HDD)/Boring and trenchless cabling. Supply, transportation and insertion of self lubricated HDPE pipe and laying of cables in boring under the track /road /ground/ masonry building by using self lubricated HDPE pipe of 120mm outer dia and 103.5mm inner dia in the bore and laying of cables in the bore under the track/road/ground/masonry building. The depth of horizontal boring should be minimum 1 mtr from rail flange/road level/ground, as per site requirement.	M	940	1068.29	1004192.60
42 NS	Supply of sub Monoblock pump set 10HP 3-Phase, 415V AC with all accessories at site as per spec	No.	6	37460.88	224765.28
43 NS	Supply, fixing and commissioning submersible pump 2 HP single phase as per model KOS 225M or similar with control panel consisting 16A MCB A-meter, V-meter indication lamp complete in all respect including connection with cable of adequate size as per railway requirement.	No.	5	12479.29	62396.45
44 NS	Supply, fixing, testing and commissioning of LT distribution panel consisting 200A MCCB incoming supply and outgoing of 2x100A MCCB and 2x63A MCCB with meters, switchgears, indication lamp etc as per spec	No.	1	43558.91	43558.91
45 NS	Supply of Submersible energy efficient Pumps (3 star or above) 10HP, 20 stages, 3-phase, 415V AC with all accessories at site as per spec	No.	6	66149.69	396898.14
46 NS	Installation of pump set with GI pipe, nut, bolts, washer, rubber packing, valve, copper cable etc as per spec	No.	9	4802.18	43219.62
47 NS	Supply and fixing pipe fittings bends sockets flanges, delivery valve and non return valve and supporting clamps (2 sets) etc. as per spec	No.	6	5577.9	33467.40
48 NS	Supply and installation of automatic control panel with star delta starter for 10HP three-phase pump including connections and providing cable from main board to control panel and connection for WLG in open well as per spec.	No.	12	19419.67	233036.04
49 NS	Supply and fixing of GI pipe 50 mm dia B class with flange for delivery with flanges, clamps, nut-bolts etc as per spec.	M	340	319.06	108480.40
50 NS	Supply and laying of copper flat cable size 3x6sqmm as per spec	M	600	111.38	66828.00
51 NS	Supply fabrication fixing and installation of MS sheet steel enclosure free standing outdoor type with heat dissipation sides 2feet above ground level for control panel and accessories of 16swg sheet size 120x70x60cms with painting and locking arrangement and foundation with installation of automatic control panel inside the box as per spec.	No.	3	12784.26	38352.78
52 NS	Supply, fixing, testing and commissioning of 40A MCCB 4 pole as per spec	No.	12	8352.05	100224.60
53 NS	Provision of capacitor 5KVAR as per spec	No.	12	6817.88	81814.56
	Total Cost of work				10855504.78

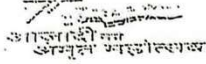
NORTH WESTERN RAILWAY	
Technical Specification	
Tender No.: EL/JP/03R/2026-27	Date of opening: 10.07.2026
Details of sanctioned estimate: NWR-JP0ENGG(W722)/60/2025, dt. 02.07.2025; NWR-JP0ENGG(W722)/25/2025, dt. 11.08.2025; NWR-JP0ENGG(W722)/72/2024, dt. 16.10.2024; NWR-JP0ENGG(W722)/71/2024, dt. 17.10.2024; NWR-JP0ENGG(W722)/138/2025, dt. 26.07.2025; NWR-JP0ENGG/40/2025, dt. 19.02.2026; Allocation PH-51	
Name of work: Electrical work in connection with [1] Replacement of old/Dilapidated quarters at RGS, SIKR, JN stns Type-II (20units), [2] Construction of new quarters for staff/officers at NNL,NIP,DBLA of Type-II(08 Units),Type-III(05 Units)& Type-IV(02 Units)=15, [3] Providing 15 units Type II quarters in lieu of old abandoned quarters for Gang No. 39,40 & 42 in SIKAR - LHU section, [4] Providing 8 units Type II quarters in lieu of old abandoned quarters for Gang No. 27 & 28 in JP- RGS section, [5] Replacement of old/Dilapidated quarters at FL,NRI,KSG stns Type-II(13 units),Type-III(05Units)&Type-IV(02 Units) =20 units, [6] Provision of Staff quarters at old KSG Station Type-2(08Nos) ,Type-III(04Nos) & Type-IV(01Nos) Total=13 Nos	
NS	Specification
1 NS	WIRING OF LP/TP/FP/Ex FAN: Supply of material and wiring of LP/TP/FP/Ex-Fan point with 1.5sqmm PVC single core multi-stranded copper wire insulated concealed in stone/brick masonry wall in 19/20mm PVC conduit with 1.5sqmm PVC copper wire for earth wire and one- way switch 5/6A and good quality ceiling rose. The contractor will be responsible for proper plastering and distempering / fixing of tiles to restore the original finish of wall such that it matches with original surface and colour of wall on which conduit pipe has been laid.
2 NS	Supply of material and wiring of LP/TP/FP/Ex-Fan point wiring shall be done by 03 x 1.5 Sqmm multi stranded copper flexible PVC insulated ISI marked Copper wire 1100 volts grade wire, confirming to relevant IS specifications and make of reference list shall be used for point wiring wire /switches for phase, neutral and earth shall be laid / done in concealed with heavy duty ISI marked PVC Conduit pipe, minimum 19/20 mm dia and thickness 01.5 mm along with bend / junction, inside PVC duct/ conduit as per instruction of site Engineer. One-way piano type modular switch type 5/6A and good quality ceiling rose. Switches shall be provided on phase wire. The entire M.S. box shall have modular plate for switches and 05 Amp modular plug with required modular design groove cutting for fixing of switches / sockets etc. The wiring shall be done in such fashion that minimum conduit pipes run inside the room as far as possible. Piano type switches, 05 amp. Modular Sockets, ceiling rose, batten holder etc. shall be of reference list. The contractor shall dismantle old wiring completely in case it is replaced with new wiring. Samples of all wiring items shall be got approved from Railway before installation. The copper wire used for earthing purpose shall not be less than wire used for wiring. Wire shall be ISI marked confirming to relevant IS specifications and make of reference list shall be used. The sub wiring shall be done in such fashion that minimum conduit pipes run inside the room as far as possible. The contractor shall dismantle existing /old wiring completely in case it is replaced with new wiring. The circuit wiring in is to be done by 03 x 1.5 sqmm insulated multi-strand copper wire for phase, neutral and earth inside PVC duct/ conduit 19/20 mm as per instruction of site Engineer. The PVC conduit shall be properly fixed with the help of MS clamps /rawal plugs as per the instructions of site Engineer. The contractor will be responsible for proper plastering and distempering / fixing of tiles to restore the original finish of wall such that it matches with original surface and colour of wall on which conduit pipe has been laid. There should be no loose connections and joints in the wiring circuit. Bends or flexible conduits should be used as per the site requirement. The wiring should be in well dressed up manner. Any discrepancy occurred in engineering work during the wiring should be restored in the original condition by the contractor, at his own cost. All metallic parts, fittings etc. shall be connected to the earth wire.
3 NS	5/6A SOCKET: Supply and fixing of 5/6A Sockets 230V or above, 5/6 pin on existing board and connection as per Railway requirement.
4 NS	5/6A SOCKET: Supply & providing 5/6A plug 5/6-pin 230V or above modular type switch socket on board and connection with 2.5sqmm PVC CU cable.
5 NS	POWER PLUG: Supply and fixing of 15/16A Sockets 230V or above, 6-pin on new flush type MS board and connection as per Railway requirement.
6 NS	POWER PLUG: Supply and fixing modular type 15/16A power plug 6-pin 230V or above and switch modular type with metal box concealed in wall and connection with 4sqmm PVC CU cable.
7 NS	FAN REGULATOR: Supply and providing of electronic fan regulator on existing board and connection as per Railway requirement.
8 NS	FAN REGULATOR: Supply and providing modular type electronic fan regulator 5step type on existing board and connection as per Railway requirement.
9 NS	Supply and fixing of MS board manufactured by 1.4/1.6mm MS sheet duly finished with two coats of red oxide, earth terminal, 3 mm sun mica sheet, zinc plated, brass screw, cup washer etc in recessed as required size

	100x100x50mm, as per Railway requirement.
10 NS	Supply and fixing of MS board manufactured by 1.6mm MS sheet duly finished with two coats of red oxide, earth terminal, 3 mm sun mica sheet, zinc plated, brass screw, cup washer etc in recessed as required size 175x100x50mm, as per Railway requirement
11 NS	Module Plate MS/PVC: Supply and fixing 12 module modular plate for fixing of switches and sheet metal box of good quality concealed fixing of MS/PVC as per site requirement.
12 NS	Module Plate MS/PVC: Supply and fixing 8 module modular plate for fixing of switches and sheet metal box of good quality concealed fixing of MS/PVC as per site requirement.
13 NS	Module Plate MS/PVC: Supply and fixing 6 module modular plate for fixing of switches and sheet metal box of good quality concealed fixing of MS/PVC as per site requirement.
14 NS	Module Plate MS/PVC: Supply and fixing 4 module modular plate for fixing of switches and sheet metal box of good quality concealed fixing of MS/PVC as per site requirement.
15 NS	Module Plate MS/PVC: Supply and fixing 2module modular plate for fixing of switches and sheet metal box of good quality concealed fixing of MS/PVC as per site requirement.
16 NS	SUB-MAINS: Supply of material and wiring of sub-main with single core insulated, multi-stranded 2x2.5mm ² PVC CU cable in PVC conduit ISI mark 19/20 or 25mm concealed in stone/ bricks masonry wall separate or same conduit & 1.5sqmm PVC CU cable insulated multi-stranded for earth wire. For separate conduit the size shall be 19/20mm 1.5mm thick and for same conduit the size shall be minimum 25 mm dia.
17 NS	SUB-MAINS: Supply of material and wiring of sub-main with single core insulated, multi-stranded 2x4mm ² PVC CU cable in PVC conduit ISI mark 19/20 or 25mm concealed in stone/ bricks masonry wall separate or same conduit & 1.5sqmm PVC CU cable insulated multi-stranded for earth wire. For separate conduit the size shall be 19/20mm 1.5mm thick and for same conduit the size shall be minimum 25 mm dia.
18 NS	SUB-MAINS: Wiring of sub-main with single core insulated, multi-stranded 2x6mm ² PVC CU cable in PVC conduit ISI mark 19/20 or 25mm concealed in stone/ bricks masonry wall separate or same conduit & 2.5sqmm PVC CU cable insulated multi-stranded for earth wire. For separate conduit the size shall be 19/20mm 1.5mm thick and for same conduit the size shall be minimum 25 mm dia.
19 NS	Fixing of LED light fitting with 2.5sqmm insulated multi-stranded copper wire for connection with necessary conduit, casing/caping as per site and railway requirement complete in all respect.
20 NS	FIXING OF FAN: Fixing of ceiling fan 1200/1400mm sweep with MS flat clamp 25x3mm and 12mm dia hook and nut bolts, GI down rod as per site requirement and connection with 2.5sqmm PVC insulated multi-stranded Copper cable
21 NS	PIPE EARTHING: Supply of material and providing earth electrode 4meters long of GI 'B' class pipe 50mm dia fixed vertically downward with 12mm dia holes around the pipe at a distance of 30 cms each with 50Kg charcoal and 10Kg salt with RCC/bricks cement earth enclosure with 3'' thickness top cover of either RCC slab or single pucca stone slab and earth electrode should be connected by 8 swg G.I earth wire from earth pit to main MSB/DB/LT panel /HT apparatus. The GI cap on top of earth pipe to be provided for protection against foreign material. The GI pipe to be tapered at one end. The 8swg GI earth wire to be fixed at bottom and top of earth pipe with 12mm dia MS nut and bolt. Dimension of digging area below ground level should be min.350 mm or above either cylindrical or square shape to provide adequate area for filling charcoal and salt.
(i)	Earthing should be as per I.S. 3043-1987 or latest and should give desired value of resistance as per I.E. Rules.
(ii)	The location of earth electrode will be such where the soil has reasonable chance of remaining Moist.
(iii)	As far as possible entrenches, permanent road ways etc. are to be definitely avoided for locating the earth electrodes.
(iv)	A plate of 14 SWG MS sheet size 150 x 100 mm painted with black enamel paint shall be fixed near the earth and following information shall be indicated (i) Earth No. (ii) Individual value of earth (iii) date of testing.
(v)	For easy tightening /un-tightening of nut bolt for measurement of earth value. Size of earth pit (enclosure) should be 12''x12''x18'' excluding thickness of wall which should be 4.5''min. Area below earth pit (foundation) should be soiled with thickness of 6'' minimum
(vi)	The distance between two electrodes should not be less than eight meter and shall not situated within a distance of 1.5 meter from the building whose installation system is being earthed.
(vii)	The GI pipe should be tapered at one end. Hot dip G.I. earth wire shall be used and connected from earth to main board/ meter board/equipment. The wire shall be run in 15 mm 'A' class G.I. pipe, along with wall / pole. The depth of 8 SWG wire in ground shall be minimum 30 cms running in 'A' class G.I. pipe. Value of each earth shall be measured after commissioning of earth.
22 NS	PVC METER BOX: Supply and fixing and sealing arrangement of PVC meter box with 2 Nos. single pole MCB 6-32A as per site requirement.

23 NS	SINGLE PHASE ELECTRONIC ENERGY METER: Supply and fixing of electronic energy meter 5-30/40A Singlephase static energy meter surface mounting type with bottom connection and terminal cover 230/240V (-25% to +20%), 50 Hz+/-10% as per IS 13779 or latest with sheet steel/Polycarbonate enclosure, with Anti temper features
24 NS	METAL CLAD PLUG SOCKET: Supply and fixing metal clad plug socket 20A single phase with 32A MCB 10kA including fixing and sheet metal enclosure box with one 20A plug top (Ray roll type) to be supplied with board.
25 NS	RCBO: Supply, fixing, testing and commissioning of RCBO double pole. Confirming to IEC 61009 or latest, sensitivity 30mA with connections capacity 25A, 230V or above, 50Hz AC on existing/separate main board as per site requirement. The RCBO to be connected in the existing/Separate board as per requirement by making proper connection in the main board and fixing the RCBO. Any alteration in the wiring of main board if required is to be done by the contractor. The features of RCBO should have inclusive of following features: (a) Isolation with positive break indication. (b) Immune to nuisance tripping due to transit over voltage (Lighting, switching surges) (c) Trip indication.
26 NS	Distribution Board 32A SPN 8OG: Supply, fixing, testing, and commissioning of distribution board single-phase and neutral with 32A DP MCB incoming and 8Nos. outgoing 6A-16A MCB single pole as per Railway requirement.
27 NS	BELL: Supply and fixing electronic bell with switch and wiring by 1.5sqmm PVC CU cable with board and connection.
28 NS	Supply and laying of HDPE pipe conforming to IS 4984:1995 50mm dia wall thickness 3 mm PN-6 under the road/wall/air with proper fixing arrangement. The work involves laying of HDPE pipe
29 NS	Digging and filling of trench size 0.4x1.2 mtr as per spec (trench work may be on kuchha/pucca and land and all type of soil as per site requirement and without protective layer of brick) surface of trench shall be made good in all respect and satisfaction of site engineer as per Railway requirement.
30 NS	Laying of LT/HT Cable in AIR / Pipe/ Wall/ Cable tray with proper fixing arrangement by MS iron clamp, MS strip, nut bolts complete in all respect as per site requirement.
31 NS	Supply and fixing modular type exhaust fan 225/250mm heavy duty including air curtain and making hole in wall if not exist including repairing the same properly with cement-sand or concrete and connection complete in all respect
32 NS	THREE PHASE ELECTRONIC ENERGY METER: Supply and fixing of three phase electronic energy meter 0-40A or above. Surface mounting type with bottom connection and terminal cover as per relevant latest IS with sheet steel/Polycarbonate meter box, with Anti temper features and 4pole MCB 63A 25kA complete in all respect.
33 NS	RCBO: Supply, fixing, testing and commissioning of RCBO. Confirming to IEC 61009 or latest, sensitivity 30mA with connections capacity 63A, 4-pole, 50Hz AC on separate main board as per site requirement. The RCBO to be connected in the Separate board as per requirement by making proper connection in the main board and fixing the RCBO. Any alteration in the wiring of main board if required is to be done by the contractor. The features of RCBO should have inclusive of following features: (a) Isolation with positive break indication. (b) Immune to nuisance tripping due to transit over voltage (Lighting, switching surges) (c) Trip indication
34 NS	DISTRIBUTION BOARD 63A: Supply fixing testing and commissioning of distribution board double door 3-phase and neutral concealed in wall with 63A four pole, 10kA incoming MCB and 12Nos. outgoing MCB 6-32A single, as per site requirement pole with front cover locking arrangement, 4MCB per phase as required by Railway.
35 NS	LT Distribution Panel: Supply and providing LT distribution panel board of MS sheet 2mm consisting 2x250A 4-pole 36kA MCCB as incoming and 4x100A 4-pole 25kA MCCB as outgoing having suitable size Copper bus bar and 3-phase 50A electronic digital energy meter 2No. in incoming, indicating lamp with A-meter, V-meter, ASS/VSS, selector switches, Copper bus and earth bus etc as required Railway complete in all respect. All MCCBs should be of Load adjustable feature type. All MCCB should have Ics= 100% Icu
36 NS	Supply, fixing, testing and commissioning of Feeder Pillar Distribution Box made of MS sheet 1.6mm thick size 600x300x600mm or above with suitable MS stand and Copper Bus Bar 200A capacity with 2 No. MCB 63A 4-pole as per requirement of Railway complete in all respect and connections for supply.
37 NS	OCTAGONAL POLE: Supply and fixing 5meter long Hot dip galvanized octagonal pole with foundation and base plate size 200x200x12mm as per standard specifications with fixing of 1No. arms 1000mm for the fittings as per requirement including smart pack junction box with 6A MCB and terminals and connection.
38 NS	Supply, fixing testing and commissioning of Astronomical timer multifunctional digital Legrand Make (Catalogue No.412657 or latest) or similar complete in all respect as per railway requirement

39 NS	Supply, laying and connecting for power supply by copper cable 2.5sqmm 3 core as per relevant and latest IS.
40 NS	Supply and laying of HDPE pipe conforming to IS 4984:1995 or latest, 75/80mm dia wall thickness 3 mm PN-4 under the road/air. The work involves laying of HDPE pipe. Whenever laying is to be done across the road, than road should be repaired with Concrete Cement properly.
41 NS	Horizontal Directional Drilling (HDD)/Boring and trenchless cabling. Supply, transportation and insertion of self lubricated HDPE pipe and laying of cables in boring under the track /road/ground/ masonry building by using self lubricated HDPE pipe of 120mm outer dia and 103.5mm inner dia in the bore and laying of cables in the bore under the track/road/ground/masonry building. The depth of horizontal boring should be minimum 1 mtr or more from rail flange/road level/ground, as per site requirement.
42 NS	1.0 Supply of Mono-block energy efficient Pump set 10HP, 3-phase, 415V AC 50 Hz suction x delivery size 65x50mm, head 52 meter or above, rpm 2900 or above, with all accessories at site. 1.1 OPEN WELL/SUMP MONOBLOCK SUBMERSIBLE PUMPING SET: The pump sets shall confirm to relevant ISS and shall be guaranteed for the pump discharge range of head between +25% and -10% of the specified head. The pump set shall be suitable for open well/sump. The open well/sump submersible pumping sets should be in accordance with the provisions of IS-14220 or latest. The pump set should have the following features. (a) Water cooled and water lubricated motor. (b) Motor body preferably of stainless steel construction. (c) Complete motor shaft of stainless steel. (d) All rotating parts to be dynamically balanced. (e) The rotor as well as stator should be impregnated under vacuum or air-drying and both should be baked repeatedly under controlled condition to ensure long life of varnish/epoxy and to give a hard finish to the motor surface. The rotor should be dynamically balanced at high speed.
43 NS	Supply, fixing and commissioning submersible pump 2 HP single phase with control panel consisting 16A MCB Ameter, V-meter indication lamp complete in all respect including connection with cable of adequate size as per railway requirement.
44 NS	LT Distribution Panel: Supply, fixing, testing and commissioning of LT distribution panel board dust and vermin proof of MS sheet 2mm thick, IP 42 degree protection consisting 200A 4-pole 36kA MCCB as incoming and 2x100A 4-pole 16kA MCCB, 2x63A 4-pole 16kA MCCB as outgoing having suitable size Copper bus bar and 3-phase 50A electronic digital energy meter 1No. in incoming, indicating lamp with Digital A-meter with 4-position Ammeter selector switch, Digital V-meter with 7-position voltmeter selector switch and one set of Neon type indicating lamp with fuses, CT, selector switches, Copper bus and earth bus etc as required Railway complete in all respect. All MCCBs should be of Load adjustable feature and fixing vertically. All MCCB should have Ics=100% Icu
45 NS	Supply of Submersible energy efficient Pumps (3 star or above) 10HP, 20 stages or above, 3-phase, 415V AC with all accessories at site. 1.1 SUBMERSIBLE PUMP SET- The pump set shall Energy Efficient Pumps (3 star or above) confirm to latest relevant IS and shall be guaranteed for the pump discharge range of head between +25% and -10% of the specified head. The pump set shall be suitable for 8" dia bore well. Rotor dynamically balanced suitable for operation on 3-phase 50Cycles 415Volts -10% +5% AC Supply. Motor squirrel cage induction type and shall be adequate capacity to provide the pump discharge within the range as specified. The Electric motor shall be water-cooled and water lubricated sealed against pollution from outside water. The thrust bearing shall be hydrodynamic Mitch well type preferably and provided with tilting thrust pads designed to make up all outward loads at the most unfavourable conditions. The motor shall be of ISI 410grade material; starter of motor should be impregnated with superior quality epoxy paint having type it thermal insulation as per IS5831-1970 or latest the rotor shall be dynamically balanced. All nut-bolts in contact with water of bore well should be of stainless steel. The motor should confirm to IS 9283-1979 or latest and shall be suitable for star delta starter and have nameplate as specified in IS 9283-1979 or latest. Discharge: 120 LPM or Above; Head range: 160m or above; Phase: 3 Phase; HP: 10 HP; Stage:20 or above. 1.2 PUMP: The hydraulic components of pump shall be lightweight and high-grade engineering material having excellent wear resistance and resistance of corrosion. The pump shaft shall be stainless steel, suction casing of pump be of cast iron from grade F6200 of IS 210-1970 or latest. The impellers shall be enclosed type and shall be of glass filled Noryl. Each pump shall be complete with the following assemblies. a) Suction case with strainer. b) Coupling. c) Non return valve fitted in pump assembly. d) Pressure compensation device and rubber device for water.
46 NS	Installation of pump set mono block & amp; submersible in bore well/ open well with nut, bolts, washer and rubber packing etc. with GI pipe and copper cable (GI pipe and cable will be supplied by Railway)
47 NS	Supply and fixing pipe fittings bends sockets flanges, delivery valve and non return valve and supporting clamps

	(2 sets) etc complete in all respect.
48 NS	<p>AUTOMATIC CONTROL PANEL: Floor mounted panel board fully automatic air break Star-Delta starter suitable to 10HP pump motor set offered with over load and under voltage protection relay. All the contractor of starter shall be of min 32A with O/L relay setting of 0.6 times, the actual load current of pump motor and O/L shall be suitable for contactor mounting type. The starter confirms to relevant IS and complete for automatic operation of pump and shall be provided with.</p> <p>a) One single phasing preventer of suitable for pump motor.</p> <p>b) One ammeter of 95x95mm size</p> <p>c) One voltmeter 0-500V with selector switching for measuring different phase voltage (size 95x95mm)</p> <p>d) Indication lamp for start/run position of pump.</p> <p>e) MCB triple poles of suitable capacity or railway requirement.</p> <p>f) Water level guard for dry run protection with probe and connecting cable for WLC in bore well.</p> <p>g) Electronic hours meter seven digits 5+2 decimal.</p> <p>h) Electronic Time switch for automatic operation of pump.</p> <p>i) 2 Nos. Earthing terminals of controls panel at suitable location.</p> <p>j) All the components/starter/relay/contactor etc shall be confirm to relevant ISS</p> <p>k) The control panel shall be dust tight vermin proof of made out of sheet metal (18swg) suitable for floor mounting & lockable type with provision of louvers for heat dissipation.</p> <p>l) The automatic control panel shall have one switch for selecting manual and automatic control.</p> <p>m) Switching ON & OFF of pump shall be through electronic time switch.</p> <p>n) The panel shall be complete with wiring with copper PVC cable 6mmsq for load wires of pump including connections and provide with 2 Nos. earthing terminals.</p> <p>o) Size of control panel (70x40x25cms or above) and fixing of panel as per Railway requirement. The panel shall be painted with one coat of red oxide and two coats of enamel paint.</p>
49 NS	GI PIPE: Supply and fixing of delivery GI pipe B class 50mm dia as per IS 1239 or latest for bore well/open well with flanges/sockets/bends as required as per site conditions in 6mtr lengths or as per Railway requirement.
50 NS	FLAT SUBMERSIBLE CABLE: Supply and laying of flat submersible cable copper 3x6sqmm for pump set ISI mark as per IS 694 Part-I 1964 or latest.
51 NS	Supply fabrication fixing and installation of MS sheet steel enclosure free standing outdoor type with heat dissipation sides 2feet above ground level for control panel and accessories of 16swg sheet size 120x70x60cms or above with painting and locking arrangement and foundation with installation of automatic control panel inside the box
52 NS	MCCB: Supply and fixing of MCCB 40A 16kA, 3-phase, 415-Volt, 50Hz, 4-pole with having fixed thermal magnetic setting. The products should have positive isolation feature. MCCB should have $I_{cs} = 100\%I_{cu}$ MCCBs should be confirmed to IS 13947-2 or latest & IEC 60947-2 or latest.
53 NS	Supply, fixing testing and commissioning of capacitor 5KVAR capacity complete in all respect as per site requirement.



भारत सरकार Government of India
रेल मंत्रालय Ministry of Railways
रेलवे बोर्ड (Railway Board)

आजुबानी
अमृत महोदय

RBA No.26/ 2022

No.2020/ACII/9/6/e

New Delhi, dated:07.04.2022

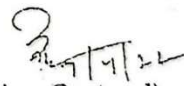
General Managers,
All Zonal Railways/ PUs.

Sub: Online BG verification through IPAS.

The matter regarding online verification of BGs by the vendors/contractors through Structured Financial Messaging System (SFMS) platform in association with SBI was under consideration from quite some time. Now, this facility is available on IPAS. In order to avail this facility, it is necessary that following details may be entered into SFMS while issuing Bank Guarantees by vendors/contractors in favour of Railways:

IFSC CODE	SBIN000RAIL
IFSC TYPE	BRANCH
BANK NAME	STATE BANK OF INDIA
BRANCH NAME	RAIL
CITY NAME	NAVI MUMBAI
ADDRESS	SECTOR-11,CBD BELAPUR, NAVI MUMBAI
DISTRICT	NAVI MUMBAI
STATE	MAHARASHTRA
BG ENABLED	YES

This IFSC Code is only valid for BG issuance and verification in favour of Railways.


(Ajay Bartwal)
Jt. Director Finance (CCA)
Railway Board
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Copy to

1. Principal Financial Advisors/All Zonal Railways/ PUs.
2. PF/ CRIS, Chanakyapuri, New Delhi-110021.
3. EDRS/G, EDCE/G
4. CGM/SBI/GBU/New Delhi
5. GM/IT Trade & TF/SBI/New Delhi
6. Advisor/MR, OSD/MR, OSD/Co-ord/MR, Additional PS/MR.