

SOUTH EASTERN RAILWAY

Deptt : S&T

E-tender Notice No: - ST-OT-IPIS-KGP-HIJ-26-27

Name of the Work: S&T portion of work in connection to (1) Replacement of Integrated passenger information system (IPIS) at HIJ (PF No-1 &2) & KGP (PF No- 7 & 8). (2) Comprehensive Annual Maintenance Contract (CAMC) of Double faced CGDB, Single line double faced Platform display board, Single faced Monocolor (MLDB) Three Line Train Arrival/Departure display board, Platform Data Controller (PDC) & Central Data Controller Unit (CDC) at HIJ (PF No-1 &2) & KGP (PF No- 7 & 8) in KGP Division of S.E.Railway.

SN	Description	Unit	Qty	Rate with GST	Cost	Inspection Authority
Schedule A-Supply and Execution (SOR Items) including GST						
1	Supply of 5 KVA online UPS 120 minutes battery backup. The detailed specification is as under, I/P - single phase 160-260 volt, O/P voltage single phase 230+/-0.5%, Output frequency 50+/-0.5% Hz, Technology - IGBT-PWM or better, Overall Efficiency (%)>=90% & <94% without Inbuilt isolation transformer, Power Factor Load Supported - 0.8 or better, Degree of protection - minimum IP 20, Battery type - SMF/VRLA conforming to JISC:8702(Pt. I, II & III), Stationary Lead Acid Batteries (with tubular positive plates) in monobloc container conforming to IS:13369:1992 latest or better. Minimum Guaranteed VAH - 16000 & other accessories - 6m cables, rack for batteries etc. Make-Luminous/V-Guard/Exide/Microtek or better.	No.	2	183933.00	367866.00	Authorized Rep. of Sr.DSTE/Co/KGP
2	Cutting and smoothening of inside surface of sizes 80 mm deep and 170 mm width for single/multiple cable chase in concrete or hard rocks or platform or cemented floor. This work includes laying and covering of cable laid in the chase with standard sizes Second class/Fly Ash brick placed and embedded longitudinally and plastered on the top of the bricks and curing 72 hrs. as per Drawing No. Con/SK/T/1 Note: Sundries materials such as Bricks, sand, cement etc., shall be supplied by the contractor at site and to be inspected by Railway Site Engineer before placing in the chase. Note: In case, chase cutting & smoothening are other than prescribed depth & width, Proportionate payment shall be released.	Mtrs.	440	256.00	112640.00	
3	Chase cutting and smoothening of inside surface of sizes 80 mm deep and 170 mm width for single/multiple cable chase in concrete or hard rocks or platform or cemented floor. Note: Sundries materials such as sand, cement, etc., shall be supplied by the contractor at site and to be inspected by Railway Site Engineer before placing in the chase. Note: In case, chase cutting & smoothening are other than prescribed depth & width, Proportionate payment shall be released.	Meter	280	146.00	40880.00	
4	Supply of HDPE pipe as per Specification No. RDSO/SPN/TC/45/2013 Rev-2.0 or latest with OD/ID of size 40mm/33mm with suitable couplers, plugs, end caps, spacer, T band etc. as required during execution at the site.	Km	3	56520.00	169560.00	Authorized Rep. of Sr.DSTE/Co/KGP
5	Transportation including loading/unloading of Optical Fibre Cable along with HDPE pipe from the stores of SSE/Store or from any store of SE Railway to the site with care laying of HDPE pipe & blowing of OFC in it as per procedure and returning empty cable drums with or without left over cable to the stores of SSE/Store. It also includes supply and placing of warning & Detection tape orange colour of 100 mm wide printed in black as "CAUTION OFC CABLE" and laid throughout the trench as directed by the Representative of Railway. Note: OTDR of cables will be done before & after its laying by contractor under supervision of Railway representative & contractor will submit their reports.	Km	3	34734.00	104202.00	
6	Supply of hot dip galvanized perforated GI cable tray , size- 300 mm X 50 mm X 1.6 mm (W X D X T) including Horizontal and vertical reducers tees, Cross members, Coupler, Nut, Bolts with down rod and other accessories including with cover complete as required and duly Suspended from the ceiling with GI suspended etc. It also includes supply of push to fit cover having side wall height 15 mm made out of 1.50 mm thick sheet. The thickness of galvanisation shall be minimum 70 microns. Note: In case of top cover is not supplied, only 80% payment to be released.	meter	600	689.00	413400.00	Authorized Rep. of Sr.DSTE/Co/KGP
7	Installation of hot dip galvanized perforated GI cable tray , size-300 mm X 50 mm X 1.6 mm (W X D X T) including push to fit cover. The sundry materials if required any apart from the supply items shall also to be supplied. Note: In case of top cover is not supplied, only 80% payment to be released.	meter	600	69.00	41400.00	
8	Supply of 6 Core Armoured Mono mode OFC cable as per latest TEC Specification or latest.	Km	3	22614.00	67842.00	Authorized Rep. of Sr.DSTE/Co/KGP
9	Supply of PVC insulated 3 Core 2.5 sq.mm Single core Multi-strands copper conductor with ISI marked conforming to IS:694/2010 or latest.	Meter	5000	104.00	520000.00	RITES

10	Supply of basic material to construct unit Maintenance Free Earth for Single Earth consisting as per Spec. No. RDSO/SPN/197/2016 Ver 1.0 or latest, bonding connections drawing no. SDO/ RDSO/E&B/002 or latest are as under, (a) Copper bonded steel electrodes of 3.0 m long, 17.0 mm diameter with copper bonding thickness of min 250 micron and UL listed and marked -1 No. (b) Earth Enhancement compound supplied in sealed bags of min 30-35 Kg.- 1 No. (c) Copper Strip of 200mm x 25mm x 6mm to exothermically welded to Earth electrode- 1 No.(d) Copper Strip of 300mm x 25mm x 6mm (MEEB) – 1 No.(e) Copper Strip of 150mm x 25mm x 6mm (SEEB)- 1 No. It also includes supply of (i) 35 Sq. mm Multi-strand Single Core PVC insulated Copper Connector as per IS:694 for connecting Main Earth Electrode to MEEB in the equipment room in duplicate.-10 meter (ii) 16 Sq. mm Multi-strand Single Core PVC insulated Copper Connector as per IS:694 for connecting MEEB to SEEB and SPDs to MEEB.-10 meter (iii) 10 Sq. mm Multi-strand Single Core PVC insulated Copper Connector as per IS:694 for connecting various equipment to SEEB- 10 meter.	Set	2	17719.00	35438.00	RDSO
11	Installation of Single Maintenance Free Earth pit as per RDSO Drawing No. SDO / RDSO/ E&B/001 which includes the following, a) Digging/Auguring/Boring of single earth pit of 100mm to 125mm dia. to the depth of approx. 3 meter. b) Insertion of 3.0 meter electrode and penetrating it minimum 150 mm by pushing gently with sledge hammer where the natural soil is assumed. (c) Filling of earth pit with Earth Enhancement Compound (EEC) in slurry form and backfilling. (d) Carrying out exothermic weld connection on single earth electrode to a copper tape of 200 x 25 x 6 mm. (e) Carrying out exothermic weld connection on the copper tape of 200 x 25 x 6 mm on Earth Electrode for connecting two 35 Sq. mm cables for redundancy. (f) The exothermic welding material for bonding the earth system shall be procured from RDSO approved firms, which includes graphite modules, clamps, weld metal powders etc. (g) The dimension of the chamber will be of 300 x 300 x 300 mm (inside dimension) of RCC with 50mm thick and fine finish, Inspection chamber should be as per IEC 62561-5 or latest. The top RCC cover size shall be 400 mm X 400 mm X 50mm. The date of testing and earth resistance value shall be written on the cover with black base with yellow paint or as per instruction of site engineer.	Set	2	6098.00	12196.00	
12	Supply of Class B & C Surge protection Device (SPD) -Type I & II with Visual Indication and Potential free contact to remote monitoring as per Specification No. RDSO/SPN/165/2023 Ver 4.0 or latest and IEC standard 61643 or latest and IEC 62304-5 or latest for Single phase 230V AC application with handling Lightning surges of 10/350 microseconds and Switching surges of 8/20 microseconds .One Set consists of 3 nos. of SPD (2 No. of B Class (L-N, N-E) and one no. of C Class (L-N) all enclosed in a Box with KEMA or VDE certified as per latest IEC 61643-11-2011 Standard or latest. Class B & C Surge protection device required with Three modules only.	Set	4	6007.00	24028.00	Authorized Rep. of Sr.DSTE/Co/KGP
13	Installation of Class B & C Surge protection Device (SPD) -Type I & II. All fitting material to be provided by the contractor.	Set	4	443.00	1772.00	
14	Supply of Fibre Distribution Management system (FDMS)/LIU for 12 Fiber complete with all accessories such as patch cord & pigtail as per TEC Spec. GR/FDM/01/02 April/2007 or latest. This includes supply of installation accessories as per technical specification.	No.	6	2604.00	15624.00	Authorized Rep. of Sr.DSTE/Co/KGP
15	Installation, splicing and commissioning of Fibre Distribution Management system (FDMS) for 12 Fiber complete with all accessories with patch cord & pigtail as per TEC Spec. with latest amendment. The sundry material if required any to be supplied by contractor.	No.	6	2086.00	12516.00	
16	Supply, transportation and installation of joint enclosure for 6/12 fibres optical fibre cable complete with all accessories including sealing with mechanical clamp facility for splicing of Optical Fibre cable.	No.	4	1502.00	6008.00	Authorized Rep. of Sr.DSTE/Co/KGP
17	Splicing of Optical Fiber Core and routing in joint closure/FDMS as per instruction of site Engineer.	Core	156	152.00	23712.00	
18	Supply of 9U Rack with 19 inch standard dimension, wall mounting, front glass door with lock and two key, with rack fixing Multi point AC power strip, cable organiser with wall fixing screws. Make: CP Plus, D-Link, or better	No.	6	6153.00	36918.00	Authorized Rep. of Sr.DSTE/Co/KGP
19	Supply of 6U Rack with 19 inch standard dimension, wall mounting, front glass door with lock and two key, with rack fixing Multi point AC power strip, cable organiser with wall fixing screws. Make: CP Plus, D-Link, or better	No.	4	4161.00	16644.00	Authorized Rep. of Sr.DSTE/Co/KGP
20	Installation, testing & commissioning of 2U/3U/4U/6U/9U/12U rack with 19 inch standard dimension as per instruction of Engineer in charge. It includes supply of all the accessories for fixing of the same.	No.	10	503.00	5030.00	
21	Supply of STP (Shielded Twisted Pair) CAT-6 Cable compliant with TIA/EIA-568-B2-1 or latest.	Metre	4880	40.00	195200.00	Authorized Rep. of Sr.DSTE/Co/KGP
22	Supply of RJ-45 connector . Make: D-link or better.	No.	300	6.00	1800.00	Authorized Rep. of Sr.DSTE/Co/KGP
23	Supply of 1G SFP module for 20 KM transmission working on single/dual fibre and should support all the software features, environmental standards and security features as mentioned in RDSO technical document no STT/TAN/IP-MPLS/2020 Ver2.0 or latest.	No.	32	3794.00	121408.00	Authorized Rep. of Sr.DSTE/Co/KGP
24	Supply, installation, testing and commissioning of Remote Monitoring System (RMS) Server as per RDSO Spec No: RDSO/SPN/TC/108/2019, Ver 1.0/ RDSO/SPN/TC/108/2019 Ver. 2.0 with Amendment No.1 or latest. as per instruction of site in charge with all required accessories and fixing arrangements to commissioning the item.	No.	1	171254.00	171254.00	RDSO

25	Supply of Platform Data Controller (PDC) conforming to System requirement of RDSO Spec No: RDSO/SPN/TC/108/2019, Ver 1.0/ RDSO/SPN/TC/108/2019 Ver. 2.0 with Amendment No.1 or latest.	No.	4	40361.00	161444.00	RDSO
26	Installation, testing and commissioning of Platform data controller (PDC) as per RDSO Spec No: RDSO/SPN/TC/108/2019, Ver 1.0 or latest as per instruction of site in charge with all required accessories and fixing arrangements to commissioning the item.	No.	4	3106.00	12424.00	
27	Supply of Central Data Controller Unit (CDC) including CDS along with required software and all accessories as per RDSO Spec No: RDSO/SPN/TC/108/2019, Ver 1.0/ RDSO/SPN/TC/108/2019 Ver. 2.0 with Amendment No.1 or latest.	No.	1	279228.00	279228.00	RDSO
28	Installation, testing and commissioning of Central Data Controller Unit (CDC) along with CDS and all accessories as per RDSO Spec No: RDSO/SPN/TC/108/2019, Ver 1.0/ RDSO/SPN/TC/108/2019 Ver. 2.0 with Amendment No.1 or latest. This includes supply of all other materials required for installation such as clamp, hanger, angles etc.	No.	1	15355.00	15355.00	
29	Supply of double-faced Coach Guidance Display Board (CGDB) along with junction box and other accessories and as per RDSO Spec No: RDSO/SPN/TC/108/2019, Ver 1.0/ RDSO/SPN/TC/108/2019 Ver. 2.0 with Amendment No.1 or latest.	No.	104	31252.00	3250208.00	RDSO
30	Installation, testing and commissioning of double-faced Coach Guidance Display Board (CGDB) in covered area along with electrical switch & board etc. as per the instructions of site supervisor conforming to RDSO Spec No: RDSO/SPN/TC/108/2019, Ver 1.0 or latest. This also includes supply of all other materials required for installation such as clamp, hanger, angles etc.	No.	89	3034.00	270026.00	
31	Installation, testing and commissioning of double-faced Coach Guidance Display Board (CGDB) in open area along with pole arm junction box, electrical switch, board, rain hood etc. and all accessories as per the instructions of site supervisor conforming to RDSO Spec No: RDSO/SPN/TC/108/2019, Ver 1.0 or latest. This also includes supply of all other materials required for installation such as clamp, hanger, angles etc.	No.	15	6621.00	99315.00	
32	Supply of single line double faced Platform Display boards for displaying information of single train & all accessories as per RDSO Spec No: RDSO/SPN/TC/108/2019, Ver 1.0/ RDSO/SPN/TC/108/2019 Ver. 2.0 with Amendment No.1 or latest.	No.	8	190900.00	1527200.00	RDSO
33	Installation, testing and commissioning of single line double faced Platform Display boards for displaying information of single train as per RDSO Spec No: RDSO/SPN/TC/108/2019, Ver 1.0/ RDSO/SPN/TC/108/2019 Ver. 2.0 with Amendment No.1 or latest. This also includes supply of all other materials required for installation such as clamp, hanger, angles etc.	No.	8	12616.00	100928.00	
34	Supply of LED based Single faced Monocolor (MLDB) Three Line Train Arrival/Departure display board & all accessories as per RDSO Spec No: RDSO/SPN/TC/108/2019, Ver 1.0/ RDSO/SPN/TC/108/2019 Ver. 2.0 with Amendment No.1 or latest.	No.	5	298483.00	1492415.00	RDSO
35	Installation, testing and commissioning of LED based Single faced Monocolor (MLDB) Three Line Train Arrival/Departure display board as per RDSO Spec No: RDSO/SPN/TC/108/2019, Ver 1.0/ RDSO/SPN/TC/108/2019 Ver. 2.0 with Amendment No.1 or latest. This also includes supply of all other materials required for installation such as clamp, hanger, angles etc.	No.	5	13616.00	68080.00	
36	Cement Concrete of proportion 1:3:6 (Cement: Sand: Stone chips of 25mm nominal size) for miscellaneous works. It includes excavation, ramming of CC by using vibrator, curing and plastering with cement and sand mixture (aggregate will not exceed beyond 3.8 cm). Note: All materials required for foundation are to be supplied by the contractor.	Cubic-meter	2	3647.00	7294.00	
37	Supply of 25mm (1 inch) (PVC casing capping in rectangular shape with separate Casing & Capping, double lock, heavy duty & ISI mark with IS:14927 or latest with minimum 1 mm thickness.	Metre	100	35.00	3500.00	Authorized Rep. of Sr.DSTE/Co/KGP
38	Supply of 25 mm (1 inch) PVC conduit pipe rigid plain ended conduit size IS:9537 (part-3) or latest and 9537 (Part-1) 1980 with latest amendment ISI marked with minimum 1.2 mm wall thickness & minimum one socket at every 3 meter pipe.	Metre	5000	27.00	135000.00	Authorized Rep. of Sr.DSTE/Co/KGP
39	Transportation and fixing of PVC Conduit pipe/channel/casing capping on wall or structure with draws of Telecom/Power/Data cable with proper finishing. This includes supply of fixing materials including flexible pipe/bend etc. as required during course of execution.	Meter	5100	15.00	76500.00	
40	Releasing of overhead cables , Power/ Signalling/Telecom, from electrical poles/ wall/FOB or as specified by the site Engineer and depositing of material in store.	meter	2000	14.00	28000.00	
41	Supply of C series MCB 2 POLE 32 AMP with metal enclosure. Make: Schneider/Legrand/L&T/Havells.	No.	6	621.00	3726.00	Authorized Rep. of Sr.DSTE/Co/KGP
42	Fixing, testing & commissioning of MCB of any capacity to the location (Relay rack/CTR/Wall/others) as advised by Railway Engineer. The sundry materials required for fixing of the same to be supplied by the contractor.	No.	6	73.00	438.00	
43	Supply of minimum 4 way 6A socket Power Strip/Power Extension board/Spike buster/spike guard with 3 led spike buster indicators for earth/neutral connectivity, ground open indicator and surge protection having minimum 3 meter chord power cable as per IS :7098 (part I):1988 or latest. Make-Havells/Crab Tree/ Anchor or better.	No.	10	644.00	6440.00	Authorized Rep. of Sr.DSTE/Co/KGP
Total of Schedule A (Incl. GST) =					10054859.00	
Schedule B-Supply and Execution (Non SOR Items) including GST						
1	Armoured , flexible, single mode, 9/125, duplex, SC-LC Connectors Optical fiber patch cords Length 5 mtrs. Make- Tech-commerce/ D-Link or Similar	No.	80	519.20	41536.00	Authorized Rep. of Sr.DSTE/Co/KGP
2	Armoured , flexible, single mode, 9/125, duplex, SC-SC Connectors Optical fiber patch cords Length 5 mtrs. Make- Tech-commerce/ D-Link or Similar	No.	80	519.20	41536.00	Authorized Rep. of Sr.DSTE/Co/KGP

3	Supply of 90 mm Diameter PE 100 HDPE Pipe	Mtr	150	690.00	103500.00	Authorized Rep. of Sr.DSTE/Co/KGP
4	Fixing of 90 mm Diameter PE 100 HDPE Pipe	Mtr	150	34.50	5175.00	Authorized Rep. of Sr.DSTE/Co/KGP
5	CAT 6/ UTP PATCH CORD (3 Mtr). Make- Tech-commerce/ D-Link or Similar	Nos	30	342.20	10266.00	Authorized Rep. of Sr.DSTE/Co/KGP
6	Supply, installation and commissioning of 08x10/100/1000 Base-T port and 04xGE SFP combo port L2 managed PoE switch conforming to RDSO/SPN/TC/83/2020 Rev.:2.1 or Latest. Make- CISCO/JUNIPER/Arista or Similar	Nos	10	23452.50	234525.00	Authorized Rep. of Sr.DSTE/Co/KGP
7	Supply, installation and commissioning of 24x10/100/1000 port and 04x1G SFP port managed Gigabit Ethernet switch including 1G SFP modules in each port conforming to RDSO/SPN/TC/83/2020 Rev.:2.1 or Latest. Make- CISCO/JUNIPER/Arista or Similar	Nos	4	27877.50	111510.00	Authorized Rep. of Sr.DSTE/Co/KGP
8	Supply, installation and commissioning of 16 port combo (GE SFP), 08x1G SFP port and 04x10G SFP+ fully managed fiber Distribution switch including 1G SFP modules in each port conforming to RDSO/SPN/TC/83/2020 Rev.:2.1 or Latest. Make- CISCO/JUNIPER/Arista or Similar	Nos	2	173460.00	346920.00	Authorized Rep. of Sr.DSTE/Co/KGP
Total of Schedule B (Incl. GST) =					894968.00	
Schedule C-CAMC of Integrated passenger information system (IPIS) items including GST						
1	AMC charges for double-faced Coach Guidance Display Board (CGDB) along with junction box and other accessories and as per RDSO Spec No: RDSO/SPN/TC/108/2019 Ver. 2.0 with Amendment No.1 or latest. [AMC charges for each CGDB per year = Rs. 3125.20/-; Quantity = 624 = 104 X 6 = The AMC is for 104 no of CGDB for 06 years]	No.	624	3125.20	1950124.80	
2	AMC charges for Platform Data Controller (PDC) conforming to System requirement of RDSO Spec No: RDSO/SPN/TC/108/2019, Ver 1.0/ RDSO/SPN/TC/108/2019 Ver. 2.0 with Amendment No.1 or latest [AMC charges for each PDC per year = Rs. 4036.10/-; Quantity = 24 = 4 X 6 = The AMC is for 04 no. of Platform Data Controller (PDC) for 06 years]	No.	24	4036.10	96866.40	
3	AMC charges for single line double faced Platform Display boards for displaying information of single train & all accessories as per RDSO Spec No: RDSO/SPN/TC/108/2019 Ver. 2.0 with Amendment No.1 or latest. [AMC charges for each PDB per year = Rs. 19090.00/-; Quantity = 48 = 8 X 6 = The AMC is for 08 no. of Platform Display boards for 06 years]	No.	48	19090.00	916320.00	
4	AMC charges for LED based Single faced Monocolor (MLDB) Three Line Train Arrival/Departure display board & all accessories as per RDSO Spec No: RDSO/SPN/TC/108/2019 Ver. 2.0 with Amendment No.1 or latest. [AMC charges for each MLDB per year = Rs. 29848.30/-; Quantity = 30 = 5 X 6 = The AMC is for 05 no. of MLDB for 06 years]	No.	30	29848.30	895449.00	
5	AMC charges for Central Data Controller Unit (CDC) including CDS along with required software and all accessories as per RDSO Spec No: RDSO/SPN/TC/108/2019 Ver. 2.0 with Amendment No.1 or latest. [AMC charges for each CDC per year = Rs. 27922.80/-; Quantity = 6 = 1 X 6 = The AMC is for 01 no. of CDC for 06 years]	Nos	6	27922.80	167536.80	
Total of Schedule C (Incl. GST) =					4026297.00	
Total of Schedule A+B+C (Incl. GST) =					14976124.00	