

Signalling Works

(For Works costing more than Rs. 50 lakhs)

Type of Work		Similar Nature of Work			
Nature of Work	Involving				
1	BPAC/LVCD/ TLBI/SLBI/TBI	i	where No Indoor Alterations involved	Any Signalling Work	
		ii	where Alterations involved in MACLS	Any Signalling Work – involving Indoor Work of MACLS/PI/RRI	
		iii	where Alterations involved in PI/RRI	Any Signalling Work – involving Indoor Work of PI/RRI	
		iv	where Alterations involved in EI	Any Signalling Work – involving Indoor Work of EI	
2	Interlocking of LC gate (Mechanical or Electrical)	i	Mid-section	Any Signalling Work	
		ii	where Alterations involved in MACLS	Any Signalling Work – involving Indoor Work of MACLS/PI/RRI	
		iii	where Alterations involved in PI/RRI	Any Signalling Work – involving Indoor Work of PI/RRI	
		iv	where Alterations involved in EI	Any Signalling Work – involving Indoor Work of EI	
3	Intermediate Block Signalling	i	where Alterations involved in MACLS	Any Signalling Work – involving Indoor Work of MACLS/PI/RRI	
		ii	where Alterations involved in PI/RRI	Any Signalling Work – involving Indoor Work of PI/RRI	
		iii	where Alterations involved in EI	Any Signalling Work – involving Indoor Work of EI	
4	Automatic Signalling	i	where Alterations involved in MACLS	Any Signalling Work – involving Indoor Work of MACLS/PI/RRI	

Type of Work		Similar Nature of Work			
Nature of Work	Involving				
	ii	where Alterations involved in PI/RRI	Any Signalling Work – involving Indoor Work of PI/RRI		
	iii	where Alterations involved in EI	Any Signalling Work – involving Indoor Work of EI		
5	Signalling Works – Outdoor	MACLS/PI/EI/RRI	Any Signalling Work – involving Outdoor Work of MACLS/PI/EI/RRI		
6	Signalling Works - Indoor	i	MACLS	Any Signalling Work – involving Indoor Work of MACLS/PI/RRI	
		ii	PI	Any Signalling Work – involving Indoor Work of PI/RRI	
		iii	RRI	Any Signalling Work – involving Indoor Work of RRI Or Indoor Work of PI with 150 Routes	
		iv	EI	Any Signalling Work – involving Indoor Work of EI	(a) If the tenderer is a not manufacturer of EI System, the tenderer should have Authorization with Original Equipment Manufacturer signed before date of Opening of tender. (b) The EI equipment should have RDSO's approval/cross-approval.
7	Signalling Works - Indoor & Outdoor	i	MACLS	Any Signalling Work – involving Indoor & Outdoor Work of MACLS/PI/RRI	
		ii	PI	Any Signalling Work – involving Indoor & Outdoor Work of PI/RRI	
		iii	RRI	Any Signalling Work – involving Indoor & Outdoor Work of RRI Or Indoor & Outdoor Work of PI with 150 Routes	

		Type of Work		Similar Nature of Work	
Nature of Work		Involving			
		iv	EI	Any Signalling Work – involving Indoor & Outdoor Work of EI	(a) If the tenderer is a not manufacturer of EI System, the tenderer should have Authorization with Original Equipment Manufacturer signed before date of Opening of tender. (b) The EI equipment should have RDSO's approval/cross-approval.
8	Data logger			Any Data logger Work Or Any Signalling Work involving Data logger	
9	Lightning & Surge Protection, Maintenance-free Earth			Any Signalling or Telecommunication Work – involving Lightning & Surge Protection, Maintenance-free Earth	
10	Miscellaneous Works involving Installation/ Replacement/ Modifications of	i	Track Circuits	Any Signalling Work – involving Outdoor Work	
		ii	Loop line/Bridge/Point Zone Axle Counters		
		iii	Cable Laying		
		iv	Point machine		
		v	Exothermic/ Pin-brazing Welding		
		vi	Minor Relay Wiring		
		vii	PPTC/ND Fuses	Any Signalling Work – involving Indoor Or Outdoor Work	
		Viii	USFBI	Any Signalling Work – involving Indoor Work	
		Ix	IPS		

Type of Work		Similar Nature of Work			
Nature of Work	Involving				
	x	Diesel Generators			
	xi	Battery Chargers/Voltage Stabilizers/ Inverters			
	xii	Secondary Cells			
	xiii	Earthing	Any Signalling Or Telecommunication Work – involving Outdoor Work		
11	Signalling - Drawing & Design	Any Signalling - Drawing & Design Or Any Signalling Work involving Signalling - Drawing & Design			
12	Annual Maintenance Contract	i	EI Systems	Any Signalling Work – involving Indoor Work of EI Or Any Annual Maintenance Work of EI Or Original Equipment Manufacturer of EI System	If the tenderer is a not manufacturer of EI System, the tenderer should have an Authorization with Original Equipment Manufacturer signed before date of Opening of tender.
		ii	DAC/UAC	Any Signalling Work – involving Work of DAC/UAC Or Any Annual Maintenance Work of DAC/UAC Or Original Equipment Manufacturer of DAC/UAC	If the tenderer is a not manufacturer of DAC System, the tenderer should have Authorization with Original Equipment Manufacturer signed before date of Opening of tender.
		iii	Diesel Generators	Any Signalling Or Telecommunication Work – involving Work of Diesel Generator Or Any Annual Maintenance Work of Diesel	

Type of Work		Similar Nature of Work	
Nature of Work	Involving		
		Generator Or Original Equipment Manufacturer of Diesel Generator	
	iv IPS	Any Signalling Work – involving Indoor Work of IPS Or Any Annual Maintenance Work of IPS Or Original Equipment Manufacturer	If the tenderer is a not manufacturer of IPS System, the tenderer should have Authorization with Original Equipment Manufacturer signed before date of Opening of tender.
	v Interlocked Gates	Any Signalling Work – Involving Outdoor	
	vi Data loggers	Any Signalling Work – involving Indoor Work of Data Logger Or Any Annual Maintenance Work of Data logger Or Original Equipment Manufacturer of Data logger	If the tenderer is a not manufacturer of Data logger, the tenderer should have Authorization with Original Equipment Manufacturer signed before date of Opening of tender.

Note 1: Tenderer should submit the Certification of Original Equipment Manufacturer for all items of RDSO Pre-commissioning Checklist for modern Signalling Systems like IPS, DAC/UAC, Data Logger, BPAC, UFSBI, AFTC, TPWS etc., before commissioning of the equipment.

Abbreviations Used:

Abbreviation	Details
BPAC	Block Proving Axle Counter
LVCD	Last Vehicle Check Device
TLBI	Token less Block Instrument

SLBI	Single Line Block Instrument
TBI	Token Block Instrument
MACLS	Multiple Aspect Colour Light Signalling
EI	Electronic Interlocking
PI	Panel Interlocking
RRI	Route Relay Interlocking
RDSO	Research, Design & Standards Organization
DAC	Digital Axle Counter
UAC	Universal Axle Counter
IPS	Integrated Power Supply

Telecom Works

(For Works costing more than Rs. 50 lakhs)

Sno	Name of Work	Definition of Single Similar Work
1	Any work related to trenching, laying & jointing of Quad cable	Any Telecom work involving trenching, laying & jointing of Quad cable
		OR Any Telecom work involving trenching, laying & jointing of OFC
2	Any work related to trenching, laying & jointing of OFC & Quad Cable	Any Telecom work involving trenching, laying & jointing of OFC
3	Any work related to trenching, laying & jointing of OFC	
4	Any work related to trenching, laying & jointing of Quad cable and control communication	Any Telecom installation work involving trenching, laying and jointing of Quad cable along with testing & commissioning of Control Equipment
		OR Any Telecom installation work involving trenching, laying and jointing of OFC along with testing & commissioning of indoor OFC equipment (STM and/or PDMUX) (Subject to conditions as given in the Note 2).
5	Any work related to trenching, laying & jointing of OFC and control communication on OFC	Any Telecom installation work involving trenching, laying and jointing of OFC along with testing & commissioning of indoor OFC equipment (STM and/or PDMUX). (Subject to conditions as given in the Note 2).
		OR Any Telecom installation work involving trenching, laying and jointing of Quad cable & OFC alongwith testing & commissioning of indoor OFC equipment (STM and/or PDMUX) (Subject to conditions as given in the Note 2).
6	Any Telecom work related to trenching, laying & termination of Telecom cables	Any Signalling and/or Telecom work which includes trenching, laying, testing & termination of signaling/telecom cables/ OFC
7	Supply & installation of Primary Digital Drop/Insert Multiplexers (PDMUX) and local lead/ OFC with/without power plant.	Any Telecom installation work of indoor OFC equipment (STM and/or PDMUX). (Subject to conditions as given in the Note 2)

Sno	Name of Work	Definition of Single Similar Work
8	Supply & installation of SDH, PDMUX and Local Lead / OFC with/without power plant.	
9	Supply & installation of SDH and Local Lead / OFC with/without power plant.	
10	Supply & installation of power plant alongwith Maintenance free VRLA/Low maintenance batteries of different capacities and/or FCBC chargers of various ratings.	Any signalling and/ or telecom work involving supply of power plant alongwith installation & commissioning.
11	Supply & installation of telecom earthing alongwith lightning/surge protection arrangements including X,Y,Z protections for various telecom installations.	Any signalling and/ or telecom work involving supply, installation and commissioning of earthing arrangements.
12	Any Telecom work related with Digital /IP based/ WLL Electronic Exchange.	Any Telecom installation work involving testing & commissioning of Digital Electronic Exchange subject to conditions as given in the note 2.
13	Supply & installation of equipment alongwith server/s for various data networks like PRS, UTS, FOIS, COIS, ICMS, CMS, COA, Railnet, data logger etc alongwith WAN and/or LAN data integration and/or networking including wiring	Any Telecom or IT work subject to conditions as given in the note 2.
14	Supply & installation of LED based Train display system at platforms and FOBs	Any telecom installation work involving Integrated Passenger Information system as per RDSO spn. RDSO/SPN/TC/61/2007 Rev.2.0 or latest and/ or Video conferencing/CCTV/ PA systems/LED or LCD or True color or Plasma displays including computer networking & software for the respective items. (Subject to conditions as given in the Note 2)
15	Supply & installation of Multiline LED based Train display system	
16	Supply & installation of LED based Coach Guidance System / Coach Summary Board	
17	Supply & installation of LED clocks with Master / Slave arrangement and/or GPS controlled Master / Slave clocks	
18	Supply & installation of PC based Auto Announcement System	

Sno	Name of Work	Definition of Single Similar Work
19	Supply & installation of Microprocessor based auto announcement system	
20	Supply & installation of E-1 based IVRS and/or Analog IVRS and/or ITES and/or NTES	
21	Supply & installation of Touch Screen Enquiry System	
22	Supply & installation of Manual Announcement System	Any telecom installation work involving Integrated Passenger Information system as per RDSO spn. RDSO/SPN/TC/61/2007 Rev.2.0 or latest and/ or Video conferencing/CCTV/ PA systems/LED or LCD or True color or Plasma displays including computer networking & software for the respective items. (Subject to conditions as given in the Note 2)
23	Supply & installation of CCTV system	
24	Design, Supply, installation, testing & commissioning of Integrated Security System consisting of IP based Video Surveillance, Access Control, Personal and Baggage Screening, Explosive Detection and Disposal System and System Integration.	Design, Supply, installation, testing & commissioning of Integrated Security System consisting of IP based Video Surveillance, Access Control, Personal and Baggage Screening, Explosive Detection and Disposal System and System Integration. The tenderer should have completed any four out of five fields of the work. (Subject to conditions as given in the Note 2)
1	AMC of LED based Train display system at platforms and FOBs	
2	AMC of Multiline LED based Train display system	
3	AMC of LED based Coach Guidance System / Coach Summary Board	May be deleted from the list as value of AMC/ Repair contracts are less than Rs. 50 lakhs.
4	AMC of Clocks	
5	AMC of PC based Announcement System	

Sno	Name of Work	Definition of Single Similar Work
6	AMC of Microprocessor based auto announcement system	
7	AMC of E-1 based IVR System	
8	AMC of Analog IVR System	
9	AMC of Touch Screen Enquiry System	
10	AMC of CCTV system	
11	AMC of Digital Electronic Exchange comprising of 500 ports or more	
12	AMC of Digital Electronic Exchange of capacity less than 500 ports.	
13	Annual Repair Contract of 25 W VHF set & Power Supplies	
14	Annual Repair Contract of 1-5 W walkie - Talkie set	
15	AMC of WLL exchange	
16	AMC of equipment for LAN	
17	AMC of satellite phones	
18	AMC of PRS / UTS System	
19	AMC of office machines such as Photocopiers, FAX	
20	AMC of PC, printers, scanners, modems, web camera, IP phones, LAN & WAN equipment, LCD & CRT monitors, keyboards, mouse, UPS, etc.	
21	AMC/Supply of, installation, testing & commissioning of Audio/Video conferencing equipment	

Sno	Name of Work	Definition of Single Similar Work
22	AMC/Cable trenching, laying, jointing of 4Q/6Q/PIJF cables, erection of posts for emergency sockets & associated work	
23	Concealed wiring in PVC conduit pipe	
24	Supply, installation, testing & commissioning of Direct to Home TV system	

NOTE 2:

Where ever the tendered telecom work involves OFC system, ISDN/NGN, Networking, IT and if the tenderer is not RDSO/TEC approved vendor for the same then additionally he shall have an MoU with RDSO/TEC approved vendor (OEM) for the respective items for the supply, installation, testing and commissioning of the same as covered in the tendered work. Such MoU should have been signed before the date of tender opening and covering the entire period of the contract. OEM to certify that all the installation and commissioning has been done as per OEM's quality and installation standards.

Abbreviations Used:

Sno	Abbreviation	Description
1	OFC	Optical Fibre Cable
2	SDH	Synchronous Digital Hierarchy
3	PDMUX	Primary Digital Multiplexer
4	STM	Synchronous Transport Module
5	FCBC	Float-cum-Boost Charger
6	VRLA	Valve regulated Lead Acid
7	WLL	Wireless Local Loop
8	PRS	Passenger Reservation System
9	UTS	Unreserved Ticketing System
10	FOIS	Freight Operations Information System
11	COIS	Coach Operations Information System
12	ICMS	Integrated Coach Management System

Sno	Abbreviation	Description
13	CMS	Crew Management System
14	COA	Control Office Applications
15	LAN	Local Area Networking
16	WAN	Wide Area Networking
17	IT	Information Technology
18	LED	Light Emitting Diode
19	GPS	Global Positioning System
20	PC	Personal Computer
21	IVRS	Integrated Voice Response System
22	CCTV	Close Circuit Television
23	FOB	Foot Over Bridge
24	VHF	Very High Frequency
25	RDSO	Research, Design and Standards Organisation
26	SPN	Specification
27	TEC	Telecom Engineering Committee
28	LCD	Liquid Crystal Display
29	CRT	Cathode Ray Tube
30	UPS	Un-interrupted Power Supply
31	4Q/6Q	4 Quad / 6 Quad
32	PIJF	Poly Insulated Jelly Filled
33	PVC	Poly Vinyl Chloride
34	TV	Television
35	IP	Internet Protocol
36	ISDN	Integrated Services Digital Network
37	NGN	Next Generation Network
38	OEM	Original Equipment Manufacturer
39	NTES	National Train Enquiry System
40	ISS	Integrated Security System