(A Government of India Enterprise) P.O. Duliajan, Pin – 786602 Dist-Dibrugarh, Assam

CORRIGENDUM NO. 1 DATED 13.06.2023 to Tender No. CDI3556P24 for 'Revamp & Maintenance of Access Layer Data Network in FHQ Duliajan, Assam'.

This Corrigendum is issued to notify the following changes:

1. The following documents have been newly uploaded in the "Amendments" folder in E-portal as replacements of the earlier:

Section-IV 'Schedule of Work, Unit and Quantity (SOQ)' Revised with the changes highlighted as below:

S1 No.	Clause No.	Original Tender Clause	Modified/Newly incorporated Tender Clause
1.	Item No. A SUPPLY, Line Item No. 50, Supply of 12 core FOC (indoor) Point No. 5	Qualification: Offered product OEM shall be member of global TIA committee. Latest member list to be submitted.	Qualification: Offered product OEM shall be member of global TIA committee or a Member of BICSI. Latest membership Certificate to be submitted.
2.	Item No. A SUPPLY, Line Item No. 50, Supply of 12 core FOC (indoor) Point No. 6		a. Tensile Strength: 800N or better b. Crush Resistance (short): 220N/cm or better c. Crush Resistance (long): 110N/cm or betterd. d. Operational temperature range: -20 deg C to +60 deg. C
3.	Item No. A SUPPLY, Line Item No. 60, Supply of 12 core FOC (outdoor) Point No. 5	Attenuation: i. @1310nm <=0.34 db/Km MAX ii. @1550nm <=0.22 db/Km MAX iii. @1380-1386nm <= 0.31db/Km	Attenuation: i. 1310nm <=0.36 db/Km MAX ii. 1550nm <=0.24 db/Km MAX iii. 1380-1386nm <= 0.26db/Km
4.	Item No. A SUPPLY, Line Item No. 50, Supply of 12 core FOC (outdoor) Point No. 7	Jacket material: Low Smoke Zero Halogen and Flame Retardant outer jacket with min jacket thickness of 2mm.	Jacket material: Low Smoke Zero Halogen and Flame Retardant outer jacket with min jacket thickness of 1.8mm.

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5. I	tom No A CLIDDI V	Qualification: Offered	Qualification: Offered
	tem No. A SUPPLY, Line Item No. 60,	Qualification: Offered product OEM shall be	Qualification: Offered product OEM shall be
	·	member of global TIA	member of global TIA
	Supply of 12 core FOC	committee. Latest	committee or a Member
	outdoor)	member list to be	of BICSI. Latest
1	Point No. 14	submitted.	membership Certificate
		Submitted.	to be submitted.
6. I	tem No. A SUPPLY,		RoHS Compliant.
	Line Item No. 60,		none compliant.
	Supply of 12 core FOC		
	outdoor)		
,	Point No. 15		
	tem No. A SUPPLY,	Category 6 Solid UTP	Category 6 Solid UTP
	Line Item No. 70,	Cable Box: ANSI/TIA-	Cable Box: ANSI/TIA-
	Supply of UTP 6 Cable	568-C.2 Category 6	568-C.2 latest or
	Point No. 1		ISO/IEC:11801 latest
8 I	tem No. A SUPPLY,	Jacket Material: PVC or	Jacket Material: LSZH
I	Line Item No. 70,	LSZH	
5	Supply of UTP 6 Cable		
F	Point No. 8		
	tem No. A SUPPLY,	Supply of SFPs, SM, 10G	Supply of SFPs, SM, 10G
	Line Item No. 200,	long range for existing	long range for existing
	Supply of SFPs, SM,	switches	switches
	10G long range for	1 000 1000 0	1 000 1000
	existing switches,	1. SFP+, 10GE Direct	1. SFP+, 10GE,
F	Point No. 1	Attach Copper	Operating Temperature 0° to 70° C
		Cable/Stacking Cable of length 1-meter,	0 10 70 C
		Operating Temperature	Existing switches Make
		0° to 70° C	& Model:
			1. Juniper - QFX5110-
			48S-AFO
			2. Dlink - DGS-1510-
			28X
			3. Digisol - DG-
			GS2628SE2 / DG-
			GS4652SE2
1	tem No. A SUPPLY,	Type: 19" 24-port	Type: 19" 24-port
	Line Item No. 240,	unloaded -a key product	unloaded - product used
	24 port patch panel	used in both Category 6	in both Category 6 link
	IU - fully loaded,	link and channel gigabit	and channel gigabit
F	Point No. 1	Ethernet applications.	Ethernet applications.
		It should be used with	Type: Each port could
		Keystone Information	have a color coded jack,
		outlet- which should	which is matching with
1		have IDC section	patch cord. Offering both

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contacts that flex not	options, the patch panel
fatigue when terminated.	is constructed of cold-
	rolled steel for additional
Each port could have a	strength and durability.
colour coded jack, which	
is matching with patch	
cord. Offering both front	
and rear labelling	
options, the patch panel	
is constructed of cold-	
rolled steel for additional	
strength and durability.	

2. Clause No. 4.0, Sub-Clause No. 4.5 in 'Section-II Scope of Work (SOW)' to be read as below:

Quote:

A dedicated maintenance team comprising minimum of 6 personnel (1 supervisor as Single Point of Contact and 5 technicians) should be dedicated to carry out assigned tasks under the scope of work as per NIT. The supervisor must have minimum 03 years diploma or any graduation degree from any recognised institute with adequate IT knowledge. The supervisor must carry documentary evidence in this regard while reporting to attend a job.

The bidder must also deploy a CCNA (Cisco Certified Network Associate)/JCNA (Juniper Certified Network Associate) or equivalent network engineer. The bidder must furnish detailed bio-data/resume/experience certificates of the engineer along with the bid.

The CCNA/JCNA or equivalent network engineer shall be part of the project and continuously monitor OIL's Network Monitoring System (NMS) and work proactively to address any LAN related issue in coordination with the maintenance team. The engineer shall be assigned from day 1 of the project, and he/she shall be involved in site survey, cable laying, configurations, access layer network maintenance etc. in all phases of the project till the completion of the entire project.

An undertaking is to be submitted by the bidder along with their offer stating that in the event of award, contractor shall deploy the requisite resources as mentioned in this clause and shall submit the CVs of the members of the maintenance team during mobilization.

:Unquote

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3. Clause No. 11, Point No. i) in 'Section-III Special Conditions of Contract (SCC)' to be read as below:

Quote:

During Supply, Installation & Commissioning phase (initial 270 days of the contract duration): All the milestones of the project till successful installation and commissioning as per the timeline mentioned in SL No. 10 shall have to be completed within 270 days from the scheduled date of completion of mobilization. Failure to meet the above shall lead to a penalty of 0.5% of the total contract value per week up to a maximum 7.5% of the total contract value shall be liable to the Contractor.

:<u>Unquote</u>

All others terms and conditions of the Bid Document remain unchanged. Details can be viewed at www.oil-india.com.

SECTION-IV

Schedule of Work, Unit and Quantity (SOQ) Revised

Revamp & Maintenance of Access Layer Data Network in FHQ Duliajan, Assam.

Item No.	Description of Services		UOM	Estimated Quantity
A	SUP	<u>PLY</u>		
	Suppl 1. 2.	ply of 24 port network switch Form factor: Height 1U (1.75 inch) max, mountable on wall, desk, rack with mounting kit. (Rack mounting kit to be supplied along with the device) Ports: i) Min 4 x 10GbE SFP+		
		ii) 24 x 1G copper ports iii) Switches should be populated with minimum 4 x 10G single mode optical transceivers from day-1, supporting minimum 2 KM distance from same OEM		
	3.	Switching Bandwidth (full-duplex capacity): Minimum 128 Gbps non-blocking switching capacity.		
10	4.	Power Supply: 230V 50HZ AC (Indian Standard), Power Cable must be supplied	Nos. (Numbers)	50
	5.	Layer 2 feature: 802.1Q VLAN tagging with minimum number of VLAN supported: 1000 STP (802.1D), Rapid-Spanning Tree (802.1w), MSTP (802.1s) VTP/802.1ak or equivalent for registration/configuration of multiple VLANs LACP (IEEE 802.3ad) or equivalent for port-based redundancy LLDP (802.1AB), At least 1024 ARP entries.		
	6.	Security features: IEEE 802.1x, RADIUS, TACACS+, Port-based (at least 256 ingress & 256 egress) & VLAN- based (at least 256 ingress & 256 egress) ACLs for IPv4 as well as IPv6 MAC based security on per port.		

	7. 8. 9. 10.	Management: SSHv2, as well as Web/HTTP/HTTPS (GUI) based management. SNMP v1, v2 and v3. QoS: 802.1p QoS/CoS and Classification based on IP address, MAC address, VLAN, TCP/UDP port number. Console Port: Required Switch should be provided with hardware replacement warranty and ongoing software upgrades for all major and minor releases for a period of 5 years. The offered product must be EAL2		
		certified under Common Criteria Certification Scheme (IC3S)		
	Sup	oply of 48 port network switch		
	1.	Form factor: Height 1U (1.75 inch) max, mountable on wall, desk, rack with mounting kit. (Rack mounting kit to be supplied along with the device)		
	2.	Ports: i) Min 4 x 10GbE SFP+ ii) 48 x 1G copper ports iii) Switches should be populated with minimum 4 x 10G single mode optical transceivers from day-1, supporting minimum 2 KM distance from same OEM		
20	3.	Switching Bandwidth (full-duplex capacity): Minimum 176 Gbps non-blocking switching capacity.	Nos. (Numbers)	90
	4.	Power Supply: 230V 50HZ AC (Indian Standard), Power Cable must be supplied.		
	5.	Layer 2 feature: 802.1Q VLAN tagging with minimum number of VLAN supported: 1000 STP (802.1D), Rapid-Spanning Tree (802.1w), MSTP (802.1s) VTP/802.1ak or equivalent for registration/configuration of multiple VLANs LACP (IEEE 802.3ad) or equivalent for portbased redundancy LLDP (802.1AB), At least 1024 ARP entries.		
	6.	Security features: IEEE 802.1x,		

	7. 8. 9. 10.	hardware replacement warranty and ongoing software upgrades for all major and minor releases for a period of 5 years.		
		Certification Scheme (IC3S)		
	Sup	oply of 12 port network switch		
	1.	Form factor: Height 1U (1.75 inch) max, mountable on wall, desk, rack with mounting kit. (Rack mounting kit to be supplied along with the device)		
30	3.	i) Min 2 x 10GbE SFP+ ii) 12 x 1G copper ports iii) Switches should be populated with 2 x 10G SFP single mode optical transceivers from day-1, supporting minimum 2 KM distance from same OEM. Switching Bandwidth (full-duplex capacity): Minimum 64 Gbps non-	Nos. (Numbers)	30
	 4. 5. 	blocking switching capacity. Power Supply: 230V 50HZ AC (Indian Standard), Power Cable must be supplied. Layer 2 feature: 802.1Q VLAN tagging with minimum number of VLAN supported: 1000 STP (802.1D), Rapid-Spanning Tree (802.1w), MSTP (802.1s) VTP/802.1ak or equivalent for		

		VLANs LACP (IEEE 802.3ad) or		
		equivalent for port based redundancy		
		LLDP (802.1AB), At least 1024 ARP		
		entries.		
	6.	Security features: IEEE 802.1x,		
	0.	RADIUS, TACACS+, Port-based (at least		
		256 ingress & 256 egress) & VLAN-		
		based (at least 256 ingress & 256		
		egress) ACLs for IPv4 as well as IPv6		
		MAC based security on per port.		
	7.	Management: SSHv2, as well as		
		Web/HTTP/HTTPS (GUI) based		
		management. SNMP v1, v2 and v3.		
	8.	QoS: 802.1p QoS/CoS and		
	0.	Classification based on IP address,		
		MAC address, VLAN, TCP/UDP port		
		number.		
	9.	Console Port: Required		
	10.	-		
		hardware replacement warranty and		
		ongoing software upgrades for all major		
		and minor releases for a period of 5		
		years.		
	Dis	tribution type 02 switch - 48 Port.		
	1.	Form factor: Height 1U (1.75 inch) max,		
		mountable on wall, desk, rack with		
		mounting kit. (Rack mounting kit to be		
		supplied along with the device)		
	2.	Ports:		
		i) Min 12 x 10GbE SFP+		
		ii) 36 x 1G SFP ports		
		iii) Switches should be populated		
		with 12 x 10G LR and 36 x 1G	N.T.	
40		LH/LX optical transceivers	Nos.	7
		single mode optical transceivers	(Numbers)	
	3.	from the same OEM from day-1. Switching Bandwidth (full-duplex		
	J.	capacity): Minimum 312 Gbps non-		
		blocking switching capacity.		
	4.	Power Supply: 230V 50HZ AC (Indian		
		Standard), Power Cable must be		
		supplied.		
	5.	Layer 2 feature: 802.1Q VLAN tagging		
		with minimum number of VLAN		
		supported: 1000 STP (802.1D), Rapid-		
		Spanning Tree (802.1w), MSTP (802.1s)		

		VTP/802.1ak or equivalent for		
		registration/configuration of multiple		
		VLANs LACP (IEEE 802.3ad) or		
		equivalent for port based redundancy		
		LLDP (802.1AB), At least 1024 ARP		
		entries.		
	6.	Security features: IEEE 802.1x,		
		RADIUS, TACACS+, Port-based (at least		
		256 ingress & 256 egress) & VLAN-		
		based (at least 256 ingress & 256		
		egress) ACLs for IPv4 as well as IPv6		
		MAC based security on per port.		
	7.	Management: SSHv2, as well as		
		Web/HTTP/HTTPS (GUI) based		
		management. SNMP v1, v2 and v3.		
	8.	QoS: 802.1p QoS/CoS and		
		Classification based on IP address,		
		MAC address, VLAN, TCP/UDP port		
		number.		
	9.	Console Port: Required		
	10.	Switch should be provided with		
		hardware replacement warranty and		
		ongoing software upgrades for all major		
		and minor releases for a period of 5		
		years.		
	11.	The offered product must be EAL2		
		certified under Common Criteria		
	_	Certification Scheme(IC3S)		
	Sup	oply of 12 core FOC (indoor)		
	1.	Cable Type: 12 core single mode fibre,		
		non-armored complying to EIA/TIA 568		
		standards; suitable for use for indoor		
		fibre cabling		
	2.	Color coding: All 12 fibres must be		
		color coded as per TIA standard.		
	3.	Jacket material: Low Smoke Zero	M	
50		Halogen and Flame Retardant outer	(Metres)	10000
		jacket with min jacket thickness of	(1/10/10/0)	
		2mm.		
	4.	Test Reports: OEM factory test reports		
		must be provided against each drum/		
	_	roll of fibre cable.		
	5.	Qualification: Qualification: Offered		
		product OEM shall be member of global		
		TIA committee or a Member of BICSI.		
		Latest membership Certificate to be		

		submitted.		
	6.	a. Tensile Strength: 800N or better		
	0.	b. Crush Resistance (short): 220N/cm		
		or better		
		c. Crush Resistance (long): 110N/cm or		
		betterd.		
		d. Operational temperature range: -20		
		deg C to +60 deg. C		
	Sur	oply of 12 core FOC (outdoor)		
	Jup	opiy of 12 core roe (outdoor)		
	1.	Cable Type: 12 core single mode fibre,		
	_ •	Armoured, Loose-tube, Gel filled cable		
		complying to ISO/IEC 11801,		
		EN50173, ANSI/TIA 568-C.3; suitable		
		for use in direct burial, outdoor ducts		
		and backbone cabling		
	2.	fibre Type: Single Mode, 9/125/250		
	۷٠	micron primary coated buffers, OS2		
		(IEC 60793-1, IEC 60794-2 and ITU T		
		G652.d)		
	3.	Color coding: All 12 fibres must be		
	٥.	color coded as per TIA standard.		
	4.	Armour: Corrugated Steel Tape Armour		
	7.	of min. 0.15 mm thickness		
	5.	Attenuation:		
	٥.			
		i. 1310nm <=0.36 db/Km MAXii. 1550nm <=0.24 db/Km MAX		
60		•	M	40000
60	6	iii. 1380-1386nm <= 0.26db/Km	(Metres)	40000
	6.	Loose tube material: Single PBTP Loose		
		tube filled with water blocking		
	7	Thixotropic gel		
	7.	Jacket material: Low Smoke Zero		
		Halogen and Flame Retardant outer		
		jacket with min jacket thickness of		
		1.8mm.		
	8.	Peripheral Strength Member: Water		
		Swellable Glass yarn strength members		
	9.	Tensile Strength: 1250N or better		
	10.			
	11.			
	12.	Operating temperature: -20 degree C to		
		70 Degree C		
	13.	Test Reports: OEM factory test reports		
		must be provided against each drum/		
		roll of fibre cable.		
	14.	Qualification: Offered product OEM		
		shall be member of global TIA		

	committee or a Member of BICSI.		
	Latest membership Certificate to be		
	submitted.		
	15. RoHS Compliant.		
	Supply of UTP 6 Cable		
	Supply of OTF o Cable		
	1. Category 6 Solid UTP Cable Box: ANSI/TIA-568-C.2 latest or ISO/IEC:11801 latest.		
	2. Outer Diameter: Maximum 6mm		
	3. Conductor diameter: Maximum 0.6mm	Nπ	
70	4. Conductor type: 23 AWG bare solid copper	M (Metres)	200000
	5. Characteristic Impedence: Maximum 100+/-10 Ohm @300 Mhz		
	6. DC Resistance: Maximum 75 Ohm/km		
	7. Insulation Resistance: Minimum 500		
	MOhm/km		
	8. Jacket Material: LSZH		
	9. RoHS Compliant.		
80	Supply of overhead poles - 9m	Nos. (Metres)	400
90	Supply of HDPE pipes - 32mm	M (Metres)	25000
100	Supply of IO Boxes (with faceplates and Backbox) including CAT6 I/O port to host RJ45 connectivity	Nos. (Numbers)	4500
110	Supply of PVC conduits, channels (40 mm)	M (Metres)	40000
120	Supply of route markers	Nos. (Numbers)	500
	Supply of fibre patch cords - 3 mtr		
	1. Connector: LC-LC		
	2. Length: 3 Mtr		
130	3. Cable Jacket: LSZH, Metal Free	Nos.	500
130	4. Insertion Loss: max 0.3 dB	(Numbers)	300
	5. Buffer: tightly buffered		
	6. Compliance: Must be ROHS/ELV compliant.		
	compnant.		

	Supply of UTP patch cords - 2 mtr (user)		
140	 Type: Category 6 Unshielded Twisted Pair 4 pair cable shall be compliant with ANSI/TIA/EIA-568-B.2-1 Additional Transmission Performance Specifications for 4-pair Category 6 Cabling. Supports ultrahigh speed data networks such as Gigabit Ethernet (1000 Base-T and 1000 Base-TX) and beyond. Cable Jacket: LSZH, Metal Free Compliance: Must be ROHS/ELV compliant 	Nos. (Numbers)	500
	Supply of LIUs - fully-loaded (96F)		
150	 Ports: 96 Port rack mountable Height: 2U Material: min 16 gauge Steel Cable Entry Points: Min 2 Nos. Drawer Style Shelf Easy Access To Splicing Tray Easy Access To Back Side Of Connector Compliance: Must be ROHS/ELV compliant Should be supplied and loaded with LC adapters, splice trays, LC SM Pigtails, fiber management rings, etc. Should be fully loaded and factory fitted assembly with no assembling required during installation at site Accessories: Pre-Loaded with grounding kits Sealed Cable Inlets For Dust And Rodent Protection 	Nos. (Numbers)	30
	Supply of LIUs - fully-loaded (48F) 1. Ports: 48 Port rack mountable		
160	 Height: 1U Material: min 16 gauge Steel Cable Entry Points: Min 2 Nos. Drawer Style Shelf Easy Access To Splicing Tray Easy Access To Back Side Of Connector 	Nos. (Numbers)	40

	_	liance: Must be ROHS/ELV		
		d be supplied and loaded with LC ers, splice trays, LC SM Pigtails,		
	fiber r 8. Shoul	nanagement rings, etc. d be fully loaded and factory		
	requir	assembly with no assembling red during installation at site		
	9. Acces i.	sories: Pre-Loaded with grounding kits		
	ii.	Sealed Cable Inlets for Dust And Rodent Protection		
	Supply of L	IUs - fully-loaded (12F)		
	1. Ports:	12 Port rack mountable		
	2. Heigh	t: 1U		
	3. Mater	ial: min 16-gauge Steel		
	4. Cable	Entry Points: Min 2 Nos.		
	5. Drawe	er Style Shelf		
	i.	Easy Access to Splicing Tray		
	ii.	Easy Access to Back Side Of		
	6 Comon	Connector	Nos.	
170	_	liance: Must be ROHS/ELV	(Numbers)	60
	compl 7. Shoul	d be supplied and loaded with LC	(Numbers)	
		ers, splice trays, LC SM Pigtails,		
	_	nanagement rings, etc.		
		d be fully loaded and factory		
		assembly with no assembling		
		red during installation at site		
		sories:		
	i.	Pre-Loaded with grounding kits		
	ii.	Sealed Cable Inlets for Dust And		
		Rodent Protection		
	Supply of S	FPs, SM, 1G long range (same		
	OEM as abo	ove switches)		
180			Nos.	180
100	· ·	1G, SMF 10km and MMF 550m,	(Numbers)	100
	-	ting Temperature 0° to 70° C,		
		x LC connector		
		FPs, SM, 10G long range		
	compatible	(same OEM as above switches)	Nos.	
190	1. SFP+,	10GBASE-LR, SMF 10 km Long	(Numbers)	30
	•	e Duplex LC connector, Operating	(Trainocis)	
	_	erature 0° to 70° C		
L	- P	-		l

	Supply of SFPs, SM, 10G long range for		
200	existing switches		
	1. SFP+, 10GE, Operating Temperature 0° to 70° C	Nos. (Numbers)	30
	Existing switches Make & Model:		
	1. Juniper - QFX5110-48S-AFO		
	2. Dlink - DGS-1510-28X		
	3. Digisol - DG-GS2628SE2 / DG- GS4652SE2		
210	Supply of GI conduits (length to be defined) 50mm	M (Metres)	500
220	Supply of UTP patch cords - 1 mtr (rack)	Nos. (Numbers)	3500
230	Supply of UTP patch cords - 3 mtr (user)	Nos. (Numbers)	1000
	24 port patch panel 1U - fully loaded.	Nos. (Numbers)	250
240	1. Type: 19" 24-port unloaded - product used in both Category 6 link and channel gigabit Ethernet applications.		
	Type: Each port could have a color coded jack, which is matching with patch cord. Offering both front and rear labelling options, the patch panel is constructed of cold-rolled steel for additional strength and durability.		
	2. Ports: 24		
	3. Plastic Housing Jack Connector: Polycarbonate, UL94V-0 rated or equivalent.		
	4. Front Connector interface: RJ45		
	5. Circuit Identification Scheme: Icons on each of 24-ports		
	6. Port Identification: 9mm or 12mm		

	Labels on each of 24-ports (to be included in supply)		
	7. Height 1 U: 1.75 inches		
	8. ROHS/ELV: Compliant		
250	32 mm silicon HDPE coupler & jointer	Nos. (Numbers)	500
260	PVC box type trunking	M (Metres)	21000
270	9U rack	Nos. (Numbers)	65
280	15U rack	Nos. (Numbers)	30
290	27U rack	Nos. (Numbers)	10
300	1U PVC cable manager - 3" deep (hinged type)	Nos. (Numbers)	250
310	Miscellaneous hardware & accessories to set up the access layer network	LS (Lump sum)	1
320	24 port network switch configuration & installation	Nos. (Numbers)	50
330	48 port network switch configuration & installation	Nos. (Numbers)	90
340	12 port network switch configuration & installation	Nos. (Numbers)	30
350	Distribution type 2 switch - 48 port configuration & installation	Nos. (Numbers)	7
В	LAYING, INSTALLATION & COMMISSIONING		

360	Laying of outdoor FO cables	M (Metres)	18000
370	Laying of indoor FO cables	M (Metres)	10000
380	Laying of overhead FO cables	M (Metres)	22000
390	Laying of PVC conduits, channels, UTP/STP cables	M (Metres)	40000
400	Laying of cable route marker	Nos. (Numbers)	500
410	Laying of GI conduits	Nos. (Numbers)	500
420	Mounting of LIUs	Nos. (Numbers)	30
430	FO cable splicing	Nos. (Numbers)	3120
440	Crimping of RJ 45/fixing and connecting I/O boxes (with faceplate, gang box, ferruling, labeling, penta testing)	Nos. (Numbers)	3500
450	Pole erection in Industrial Area	Nos. (Numbers)	400
460	Trenching/HDD other OIL locations (soft soil)	M (Metres)	2000
470	Road crossing (boring/road cutting/drain/culvert/river crossing) (hard soil)	M (Metres)	500
480	Laying of UTP cable (outdoor)	M (Metres)	200000

490	Installation & fixing of PVC cable trunking/ channel	M (Metres)	21000
500	Laying & Fixing of HDPE Pipe	M (Metres)	25000
510	Installation of 24Port patch panel with termination	Nos. (Numbers)	250
520	Installation of PVC cable manager 1U	Nos. (Numbers)	250
530	Installation of 27U floor mount racks	Nos. (Numbers)	10
540	Installation of 9U/15U wall mount racks	Nos. (Numbers)	95
550	Installation, laying & patching of OFC patch cords - for UPLINKS & DOWNLINKS	Nos. (Numbers)	500
560	Misc civil work for during revamp of access layer	LS (Lump sum)	1
570	Implementation, integration, project management and documentation, penta scanning charges and dismantling of old OFC, CAT cable, rack, patch panel, I/O etc.	LS (Lump sum)	1
C	MAINTENANCE		
580	Maintenance of access layer including NOC Monitoring	QTR (Quarter)	20.00

Notes:

- i) The payment against supply of switches shall be made after successful delivery and acceptance of the switches.
- ii) Payment against the supply of passive items shall be released after actual delivery of the items.
- iii) All other remaining payments against cable laying, pole erecting, installation & configuration of switches etc. shall be released after successful completion of installation & commissioning of the access layer network.

iv) Payments against routine maintenance of access layer including NOC monitoring shall be released on quarterly basis after completion of the quarter.

End of SOQ