



**MAHARASHTRA STATE ELECTRICITY TRANSMISSION CO. LTD.**  
(CIN NO- U40109MH2005SGC153646)

The Executive Engineer, EHV O&M Division, Kolhapur.  
Near Market Yard, Bapat Camp, Kolhapur-416005  
Phone:- (O) (O) 0231-2651529, Fax-0231-2680171,  
Email:-ee3210@mahatransco.in  
Website:-www.mahatransco.in

EE/EHVO&M/DN/KOP/T/LP/599

Date:04.05.2023.

**E-ENQUIRY**

**Sub:-** Enquiry for work of Attending emergency breakdown & maintenance work of various EHV lines under EHV O&M Dn, Kolhapur.

Dear Sir,

Sealed and super scribed quotations submit to the office of Executive Engineer, MSETCL, EHV O&M Division, Bapat Camp, Kolhapur on or before : 11.05.2023 up to 17:00 Hrs.

Sr. No.	Particulars of work	Quote Rates in % basis Above/Below/At Par (Incl. Taxes)
1	Scope of work as per Enclosed Schedule A & B	

Work Order amount will be limited upto Rs. 3.0 Lakhs Incl. of all taxes.

Terms & Conditions are enclosed herewith for ready reference.

**Executive Engineer  
EHV O&M Division Kolhapur**

## **TERMS AND CONDITIONS OF CONTRACT**

- 1) **Scope of Work :-** The work under this enquiry is related with attending emergency on lines due to break down, and maintenance. Agency should arrange transportation of material / T&P/Labour at site at their own cost. Time is essence of this work and should be strictly followed.
- 2) **SECURITY DEPOSIT:** Submit the 5% security deposit in form of BG/DD/Chq/Cash to this office after issue of LOI. The security deposit will be refunded after completion of total work order & NOC from the concern Incharge. In case of failure of work S.D will be forfeited.
- 3) **EXECUTION OF WORK:** Immediate after completion of formalities the contractor shall take prompt action in planning for timely procurement of necessary material and tools and plant.
- 4) **SUPERVISION OF THE WORKS:** The works shall be under the overall supervision and shall be subject to the approval of the Executive Engineer or his designated representative. The contractor shall obtain a certificate from the Division In charge for having executed the work satisfactorily as per schedule.
- 5) **QUALITY OF WORK :** Quality of work to be carried out should be strictly confirmed to our specification, otherwise same will be rejected and contractor has to redone the Same at his cost and risk.
- 6) **QUANTITIES:** The quantities indicated in Schedule 'A & B' are tentative and only indicating. The actual quantity may vary. The payment will be made on the actual measurement basis.
- 7) **CONTRACTOR'S EMPLOYEES:** The contractor shall employ and provide onsite only such employees who are skilled and experienced for execution and supervision of work. The contractor shall provide housing accommodation to his employees. He shall also be responsible for any injury / accident to his employees. Payment of compensations etc. as may required to be paid eventually shall be borne by the contractor himself. The contractor should ensure that his staff uses the requisite safety equipment. The employees should be duly insured against any such eventuality. The proof of insurance should be submitted to this office along with order acceptance letter.  
Any accidents occurred during the period of execution of work to any of your workers or to any outsider will be entirely on Contractor's account and Company is not responsible for the same in any way. All the safety precautions should be observed by the contractor.
- 8) **DAMAGES TO THE PERSON & PROPERTY:** The contractor shall indemnify the M.S.E.T.Co. Ltd. against any loss and claims regarding any injuries or damage to any persons, material & physical damage to any property whatsoever which may arise out of or in consequence of the execution of work.
- 9) **SITE CLEARANCE:** The contractor shall during the progress of work, keep the site reasonably free of all unnecessary obstructions and shall store the material nearby so as not to cause any obstruction for normal working / operations. Similarly on completion of the works the contractor shall clear away and remove from the site all surplus material,

rubbish and temporary work of any kind. Site should be kept clean.

- 10) **SUB LETTING OF CONTRACT:** The contract or any part thereof shall not be assigned, transferred, or sublet without the prior written permission of the undersigned. Even if such permission is granted, it shall be responsibility of the principal contractor to whom the work order was originally issued to execute the works as per the terms of the contract.
- 11) **COMPLETION TIME:** For emergency work, the work should be attended ( reached at site & Started) within 6 Hrs. from the time of intimation to you. The work should be completed as per directives of operating officer depends on the type of fault. Operating Officer will be concern Additional Executive Engineer of respective EHV O&M Subdivision.
- 12) **Mobilization & Demobilization Charges:-** These charges will be applicable only in case of emergency breakdown call & not applicable in case of planned outages. Planned outages will be informed to you in advance by concern operating officer.  
The operating officer will record the time of emergency call and time of report of gang along with total duration of attending fault of the contractor at the said location in SAP. The same should be highlighted in the occurrence report communicated to H.O. EHV Lines are under districts of Kolhapur.  
**For all other works of lines excluding emergency breakdown, the work should be carried out as per planned outages and no mobilization charges will be paid for planned outage.**  
**Also in case gangs are mobilized at site by agency in case of planned outage and no work is carried out by agency due to MSETCL constraints e.g non availability of outage etc. then mobilization charges will be paid to agency as gangs are actually mobilized.**  
**Head loading charges :-** Head loading charges will be applicable only for the location in hilly area which are not approachable by any vehicle. It will be applicable in plain area for tower location beyond 200 meters from the nearest spot approachable. It will be applicable for unapproachable tower locations due to rains. This will be in addition to mobilization charges ( if applicable ) as special condition.
- 13) **Validity :-** The work order should be valid for 3 months from the date of issue of order or amount exhausted whichever is earlier.
- 14) **FORCE MAJEURE :**Only the following conditions shall be considered for the purpose of this clause.  
a) Natural Phenomenon such as floods, Draughts, Earthquakes, Epidemics etc.  
b) Acts of any Government, Domestic or Foreign including but not limited to war (Declared or undeclared) guaranties embargoes.  
c) The party affected by 'Force Majeure' shall within 15 days of the occurrence of such a cause, notify the M.S.E.T.Co Ltd. in writing with sufficient documentary proof.
- 15) **Submission of bills /Payment of bills:** -The bills in triplicate should be submitted to the concerned Subdivisions who will record in SAP & submitted to division office for technically scrutiny, Auditing & payment. Payments will be made subdivision wise.

- 16) **TAX DEDUCTION AT SOURCE & LABOUR CESS DEDUCTION:** Income Tax @ 2 % or as applicable will be deducted from the bills. Similarly any other taxes, such as GST as per applicable from registered contractor/unregistered contractor if applicable to this particular contract, as per statutory provisions (laid down by Central or State Government) will also be deducted from the bills at the prevailing rates. 1% labour cess will be deducted, hence rates should be quoted accordingly.
- 17) **PENALTY: A)** For Emergency work:- you should be reached at site within 6 Hrs. from the intimation and completed as per directives of operating officer, If agency fails to reach at site within 6 hrs penalty @ ½ % per delay per invoice will be implemented which will be maximum upto 10% of work order value ( Except unapproachable areas justified by subdivision Incharge) Same should be certified by agency.  
**B)** For all other works of lines excluding emergency breakdown, the work should be carried out as per planned outages, failing to which the penalty @1/2% per day delayed day subject to 10% of contract value will be charged.  
If outage program is cancelled due to unavoidable circumstances, no charges on any account will be paid by this office.
- 18) **TERMINATION OF CONTRACT:** The undersigned reserves the right to cancel the contract after giving due notice to the contractor, in the event of the breach of contract in any respect. Undue delay in completion of contract work is also liable to result in the M.S.E.T.Co. Ltd. getting the work done through other agencies at the risk and cost of the contractor.
- 19) **FAILURE OF EXECUTION OF THE WORK:** For failure to execute the work as per Schedule against the order in full, within the stipulated period, the Company shall be at liberty, without further notice or reminder to the Contractor to get the same work done on account of and at the risk & cost of the contractor and a claim for the difference in price and for all expense whatsoever incurred in getting the said work done and the same shall be recovered from any payment due to the Contractor from bills or deposit or on any account such expenses will also include 15% Supervision charges.
- 20) **APPLICABILITY OF GENERAL CONDITIONS OF CONTRACT:**  
Notwithstanding anything stated herein the M.S.E.T.Co. Ltd's General Terms and Conditions of contract shall be applicable to the contract. In case of any dispute whatsoever, regarding interpretation of the terms and conditions, or quality, the decision of the Executive Engineer TRANS. O&M Division, Kolhapur will be final and binding on the contractor.
- 21) **JURISDICTION:** All dispute, difference related to the Enquiry contract shall be subject to the jurisdiction of District Court, Kolhapur.
- 22) **Idle Labour hours:** - In planned outage if due to any reasons if outage is not availed and gangs of agency are mobilized then mobilization charges will be paid. Same should be certified by subdivision Incharge.
- 23) All other Standard Terms and conditions prescribed by MSETCL regarding supply and work which are not stated here are also applicable to this contract.
- 24) Proper records of breakdowns of lines with time, date, and locations, number of persons deployed be maintained & audited before release of payment. Further, the signature of the supervisor from MSETCL be obtained on the separate register. Restoration details (date & time) also the details of shutdown taken for replacement of defective equipments/parts be recorded in the register).

- 25) **Guarantee Certificate :** You will have to give the **guarantee of one year** for workmanship from the date of work completion and guarantee certificate thereof should be submitted along with bill. For any **defects in workmanship you will have to give free service within 7 days** from the date of intimation within guarantee period including providing and fixing of material.
- 26) Necessary outages for the work under Schedule 'A/B' will be arranged by the Operating officer.
- 27) Old / damaged / replaced parts /material should be handed over to the concerned S.D.O. or Sub-Station in-charge and certificate to that effect should be recorded in SAP. & Bill.
- 28) All required T & P / Manpower will be at your cost. The required material (Earth wire, Insulators, Conductors, Tower members) of schedule 'A' will be supplied by MSETCL.
- 29) You shall be abiding with all Govt. Rules, Regulations, status for this work including Workman Compensation Act. Any deviation will be at your cost and risk.
- 30) The workmanship should be of best quality and it should be up to satisfaction of supervision staff.
- 31) You will have to give the guarantee of one year for workmanship from the date of work completion and guarantee certificate thereof should be submitted along with bill. For any defects in workmanship you will have to give free service within 7 days from the date of intimation within guarantee period including providing and fixing of material.
- 32) The Income Tax & GST TDS will be deducted as per existing rules. Your Firms PAN No., GST Registration No. should be quoted on bill.
- 33) **Agreement bond** on Govt. Stamp paper of Rs. 500/- submit to this office.
- 34) Any accident to your labours while executing the work/any loss/damage to the MSETCL's property during execution of work will be on your account and you will have to make it good at your cost.
- 35) The insurance of your labours will have to be done at your cost. If failed to do so any compensation or claim arrears will be at your responsibility.
- 36) The MSETCL will not provide accommodation to your technicians / supervisors, labours at various places. The transportation of material / labours will have to be done at your cost.
- 37) **Note::-** Following documents should be submitted with quotation only:

Sr. No.	Particular
1	Valid Electrical Contractor License.
2	Registration under GST
3	Proof regarding payment of Income Tax Return for the <b>FY 2020-21</b>
4	Certificate having successfully completed emergency breakdown & maintenance work of various EHV Lines from an authority similar to the rank of Ex. Engineer & equivalent.
5	PAN Card copy.

(Abhijit C Dhamale)  
**Executive Engineer**  
**EHVO&M Division Kolhapur**

### Schdule A

SR. NO.	PARTICULARS OF ACTIVITY	UNIT	RATE (in Rs.)	LC @ 1%	Rate/Unit Incl.1%LC	GST @ 18%	Rate Per Unit Incl. All Taxes	SAP No.
1	Mobilization & Demobilization of T & P, labours to the site location to attend planned work in "Outage" from respective division. ( Applicable for min. 15 labours)	Per Occasi on	21519	215.19	21734.19	3912.15	25646.34	50015581
2	Mobilization & Demobilization of T & P, labours to the site location to attend "Breakdown" from respective division. ( Applicable for min. 15 labours)	Per Occasi on	41813	418.13	42231.13	7601.60	49832.73	50015583
3	<b>Replacement of Suspension/Pilot string Work involved</b> -Hook out suspension clamp from disc insulator string, Hook out suspension string from the hanger, take it out on ground, erect new suspension string by hooking it in hanger, refix suspension clamp.							
	<b>I) SUSPENSION STRING</b>							
	<b>a)</b> Replacement of Single Suspension string SSN insulators in Plain, Hilly / Creak Area of <b>Single Circuit</b> , <b>Double Circuit</b> , dead line or having one circuit live or other circuit dead.	Per String	10760	107.60	10867.60	1956.17	12823.77	50015013
	<b>B)</b> Replacement of suspension string SSN insulator in plain hilly / creal area multicircuit line	Per String	11955	119.55	12074.55	2173.42	14247.97	50015764
	<b>c)</b> Replacement of Double Suspension string DSN insulators in Plain, Hilly/ Creak Area of <b>Single Circuit line dead line, Double Circuit</b> , dead line or having one circuit live or other circuit dead.	Per String ( DTN is conside red as whole one string)	10760	107.60	10867.60	1956.17	12823.77	50015014
	<b>d)</b> Replacement of suspension string DSN insulator in plain - hilly / creak area of multicircuit line	Per String ( DTN is conside red as whole one string)	14346	143.46	14489.46	2608.10	17097.56	50015014

	<b>II) PILOT STRING</b>							
	<b>a)</b> Replacement of Pilot string insulators in Plain, Hilly/ Creak Area of Single Circuit , Double Circuit, dead line or having one circuit live or other circuit dead.	Per String	7173	71.73	7244.73	1304.05	8548.78	50017335
	<b>b)</b> Replacement of Pilot string insulators in Plain, Hilly/ Creak Area of Multi circuit line	Per String	8369	83.69	8452.69	1521.48	9974.17	50017334
4	<b>Replacement of tension string insulators DTN/STN</b> Work involved - Taking tension on the conductor on which Tension string is to be replaced, Hooking out tension hardware from tension plate, take down the string on the ground , replace it with new tension string and re-fix the same at tension plate by using come-along clamps and other tensioning equipments and adequate manpower.							
	<b>TENSION STRING</b>							
	<b>a)</b> Replacement of tension string insulators <b>STN</b> in Plain , Hilly/Creak area of <b>Single Circuit</b> dead line.	Per String	14346	143.46	14489.46	2608.10	17097.56	50000204
	<b>b)</b> Replacement of tension string insulators <b>STN</b> in Plain, Hilly/ Creak area of <b>Double Circuit</b> line having one circuit live & one circuit dead.	Per String	15542	155.42	15697.42	2825.54	18522.96	50000204
	<b>C)</b> Replacement of tension string insulators <b>STN</b> in Plain , Hilly/Creak area of <b>Multi Circuit</b> dead line.	Per String	15542	155.42	15697.42	2825.54	18522.96	50016894
	<b>d)</b> Replacement of tension string insulators <b>DTN</b> in Plain, Hilly/Creak area of <b>Single Circuit</b> dead.	Per String ( DTN is considered as whole one string)	21519	215.19	21734.19	3912.15	25646.34	50015012
	<b>e)</b> Replacement of tension string insulators <b>DTN</b> in Plain, Hilly/ Creak area of <b>Double Circuit</b> line having one circuit live & one circuit dead.	Per String ( DTN is considered as whole one string)	22715	227.15	22942.15	4129.59	27071.74	50015012

	<b>f)</b> Replacement of tension string insulators <b>DTN</b> in Plain, Hilly/Creak area of <b>Multi Circuit</b> dead.	Per String (DTN is considered as whole one string)	23910	239.10	24149.10	4346.84	28495.94	50016891
5	<b>Stub Strengthening Work involved :-</b> <b>(i)</b> Excavation / breaking of existing foundation around the tower leg. Breaking the cement concrete of chimney upto the affected, corroded portion of stub. Cleaning and surface preparation of tower stubs. <b>(ii)</b> Drilling of suitable size G I angles for inner side & outer side sections. <b>(iii)</b> Painting the pieces / tower members upto 3 mtrs. section and stub on either side with epoxy polyamino amide base resin.							
	<b>(iv)</b> Drilling the angle pieces to the stub. The drill should be peccied & lengthwise at a distance of suitable gap of the stub and the angle piece should be filled with high & low viscous epoxy grout to avoid voids in gaps. On filling the gap the top & bottom sides should be sealed by cold welding.							
	<b>(v)</b> Application of one coat of epoxy resin as a primer. Application of EPI resin base coat on the whole surface (around the stub) upto length of 1.5mtr. Wrapping EPI plast strengthening material round the joint. Impregnating EPI wetting resin in joint if any filling by epoxy adhesive.							
	<b>(vi)</b> Concreting of in the situ 1:2:4 concrete of existing size including raising of chimney height of the stub including muffing etc. in all respect . Application of curing agent after four to five days or sufficient curing period on the concrete surface. Back filling, removal of debris, cleaning the site etc as per directives of work in-charge. All T & P, manpower, material etc. shall be arranged by the contractor. Work is to be guaranteed for the period of 2 years.							



	<b>a) Suspension tower</b>							
	- Upto 110 KV Tower/132 KV Tower	Per Leg	14346	143.46	14489.46	2608.10	17097.56	50008665
	- Upto 220 KV Tower	--"--	16737	167.37	16904.37	3042.79	19947.16	50008663
	<b>b) Tension tower</b>							
	- Upto 110 KV Tower/132 KV Tower	Per Leg	16737	167.37	16904.37	3042.79	19947.16	50008666
	- Upto 220 KV Tower	--"--	19128	191.28	19319.28	3477.47	22796.75	50008664
6	<b>Chimney height raising</b> Work involved :- Excavation of footing of 1Mtr. X 1Mtr.X 0.3Mtr. around chimney, breaking of existing concrete chimney 0.3 Mtrs from ground with the help of Chisel & hammer, cleaning of leg, painting with epoxy paint upto 2 Mtrs. Providing & Casting of 1:2:4 grade CC mix of trap metal upto 0.2 Mtr. above ground level for chimney by using steel / plywood form box, concreting, curing etc. complete in all respects.	--"--	8369	83.69	8452.69	1521.48	9974.17	50002912
7	<b>Replacements of tower cross arms</b>							
	<b>i) For single circuit dead line tower.</b>							
	Suspension / Cut Point Tower	Cross Arm	23910	239.10	24149.10	4346.84	28495.94	50004433
	<b>ii) For D/C tower one circuit dead &amp; one circuit live</b>							
	Suspension / Cut Point Tower	Cross Arm	29888	298.88	30186.88	5433.64	35620.52	50004433
	<b>iii) Suspension / Cut Point Tower</b>	Cross Arm	35866	358.66	36224.66	6520.44	42745.10	
8	Complete erection of SC/DC/MC/Horizontal tower (Including special towers) with its extensions for EHV lines (as per requirement) with fixing of bolts and nuts, tightening, punching and fitting including attachments (like step bolts, ladders, platforms, "U" bolts, shackles, hangers, strain plates etc) and including transportation of materials from site stores to work sites, tightening and punching of bolts and nuts complete in all respect, punching of bolts, fixing of danger plates, fixing of number plates, fixing of phase plates, fixing of anticlimbing device, fixing of circuit plate etc. For M/C Tower all circuit of one side dead & all circuit of other side live	MT of Tower weight	4224.48	47.25	4772.03	858.97	5630.99	50006660

9	Dismantling charges for tower	MT of Tower weight	3817.75	38.18	3855.93	694.07	4549.99	50006671
10	A) Pipe type earthing							
	Work includes excavation of pits/ trenches, laying of pipe & G.I strip, filling, chemical / bentonite, salt, charcoal surrounding G.I pipe, connecting G.I strip to tower, back filling, ramming, compacting etc complete including supply of complete set of pipe earthing including G.I strip 50mm x 6 mm x 3.5 Mtrs length and 25 mm dia. & 4 mm thickness for hot dip galvanised pipe 3 Mtrs length & required G.I nutbolt as per drawing and coal 150kg & salt 15 kg or bentonite.	No	6593	65.93	6658.93	1198.61	7857.54	50006587
	B) Counter poise type earthing							
	Work includes excavation of pits/ trenches, laying of earth wire and fitting plates/lugs to tower legs including supply of all materials ( viz GI wire, lugs, nut- bolts etc) and back filling, complete in all respect as per drawing to be furnished by the owner	No	14730	147.30	14877.30	2677.91	17555.21	50006586
11	Fixing of copper spike rod earthing at tower peak with separate earth pit and material.	Per Tower	15542	155.42	15697.42	2825.54	18522.96	
12	Painting of Tower / Stubs by applying one coat of Red Oxide and two coats of Aluminum paint including cleaning of rusted portion as per the enclosed specification.(Total RMT of tower/stub/extensions to be calculated by adding length of tower members as per BOM.)	Rmt	38	0.38	38.38	6.91	45.29	
13	Anticorrosive painting of Tower as per the enclosed specification.(Total RMT of tower/stub/extensions to be calculated by adding length of tower members as per BOM.)	Rmt	12	0.12	12.12	2.18	14.30	

**Note :-**

- 1) Rates are inclusive of GST taxes applicable, in case of supply of material.
- 2) Mobilization/De-mobilization charges are applicable on occasion basis, irrespective of days. These charges are applicable only for the deployed gang comprising minimum 15 Labours.
- 3) The Mobilization charges shall not be applicable for Non-Outage/Non-Breakdown activities.
- 4) Number of gangs to be deployed for a particular work will be at the discretion of engineer in charge, though the work involved seems to be small or less in quantity. It will be decided considering the quantum of work, geographical, weather and other R.O.W. conditions at that time.

- 5) Head loading charges will be applicable only for the locations in hilly area which are not approachable by any vehicle. It will be applicable in plain area for tower location beyond 200 meters from the nearest spot approachable. It will be applicable for unapproachable tower locations due to rains. This will be in addition to mobilization charges as a special condition.
- 6) Mobilization charges will be payable even if actual work is not carried out due to non approval of outage in real time with condition that gang/gangs should be physically moved to the site and available at tower location and not ready for movement at contractors location.
- 7) **Activity to be covered in PLANNED OUTAGE** - Any activity which is identified in advance and to be carried out in outage solely proposed for that particular work. For example- Replacement of STN with DTN, Replacement of faulty disc insulators.
- 8) **Activity to be covered in EMERGENCY** - Any activity which is not identified in advance and it is to be carried out in breakdown of equipments only For example- Failure of disc insulators, snapping of conductor, earthwire, bending of cross arm etc.
- 9) For the work of "Providing & Fixing of Clamps Connectors & Hardwares " the supply rates of this schedule may be considered for estimation purpose.

(Abhijit C Dhamale)  
**Executive Engineer**  
**EHVO&M Division Kolhapur**

### Schedule B

SR. NO.	PARTICULARS OF ACTIVITY	UNIT	RATE(in Rs.)	LC @ 1%	Rate/Unit Incl.1%LC	GST @ 18%	Rate Per Unit Incl. All Taxes	SAP No.
1	<b>Patrolling</b>							
	<b>a) Ground Patrolling</b> Work involved - Checking of Trees, Bushes, foundation, Earthing, Missing member, HT/LT/EHV Line crossing, River crossing, Road crossing, chimney, number plate, danger board etc. with plain eyes & insulator flashover, jumpers and its nut bolts, conductor, earthwire, vibration dampers, Spacers, M.S.Joint, Repair Sleeves, Corona Rings etc.with binoculars Checking clearances for Ground, Road, Building. Submission of report.							
	For distance starting from source s/s <b>upto 30 km</b>	KM	1793	17.93	1810.93	325.97	2136.90	50010322
	For distance starting from source s/s <b>above 30 km</b>	KM	2391	23.91	2414.91	434.68	2849.59	50010322
	<b>b) Monkey Patrolling</b> ( by authorized personnel only ) In addition to above Work involved - Checking of conductor deformation, earthwire, earthbond, hardware, jumper cones and its nut bolts, bird guards, tightness of nut bolts of tower visually flashover, birdsheet, Checking of Broken/Contaminated/Flashover disc insulators. Split pin, Sag etc. Submission of report including soft copy of photos.	Per Tower						
	S/C	EA	1000	10	1010	1811	1191.80	50015357
	D/C	EA	1500	15	1515	272.70	1789.70	50015356
	M/s	EA	2000	20	2020	363.60	2383.60	50015707
2	<b>Fixing / crimping of compression type clamps, connectors, Hardwares</b> (Material supplied by MSETCL) Work involved - Taking the compression type clamp/connector on the conductor , fixing it properly at desired place, crimping it with remote operated hydraulic crimping machine of adequate capacity ,on the conductor,							
	<b>a) Replacement Single T connectors</b> suitable for 0.1 to 0.5 ACSR Conductor & 525 Sqmm. Cond.	No.	956	9.56	965.56	173.80	1139.36	50006542

	<b>b) Fixing Repair sleeves for 0.1 to 0.5 ACSR Conductor &amp; 525 Sqmm. Cond.</b>	No.	5978	59.78	6037.78	1086.80	7124.58	50007372
	<b>c) Fixing Twin 'T' connector suitable for 0.1 to 0.5 ACSR &amp; 525 Sqmm. Cond.</b>	No.	1793	17.93	1810.93	325.97	2136.90	50006546
	<b>d) Fixing of Mid span joint suitable for 0.1 to 0.5 ACSR &amp; 525 Sqmm. Cond.</b>	No.	1435	14.35	1449.35	260.88	1710.23	50009955
	<b>e) Replacement/tightening of Jumper Nut bolts</b>	No.	60	0.60	60.60	10.91	71.51	50004432
	<b>f) Fixing of Corona Ring (Suspension/Tension)</b>	No.	837	8.37	845.37	152.17	997.54	50015563
	<b>g) Replacement of Jumper Cone/Jumper suitable for 0.1 to 0.5 ACSR Conductor &amp; 525 Sqmm. Cond.</b> Work involved - Removing the jump cone from hardware, replace it with new one if the conductor jumper length is sufficient, Else crimping of new jump cones at both ends	No.	1435	14.35	1449.35	260.88	1710.23	50015662
	<b>h) Replacement Single / Double Tension hardware</b> suitable for 0.1 to 0.5 ACSR Conductor & 525 Sqmm. Cond. Work involved- Taking tension on the conductor on which Tension hardware is to be replaced, Hooking out tension hardware from tension plate, take down the string on the ground, replace it with new tension hardware and re-fix the same at tension plate by using come-along clamps and other tensioning equipments and adequate manpower.	No.	2391	23.91	2414.91	434.68	2849.59	50012853
	<b>i) Replacement Single / Double Suspension Hardware</b> Suitable for 0.1 to 0.5 ACSR Cond & 525 Sqmm. Cond. Work involved -Hook out suspension clamp from disc insulator string, Hook out suspension string from the hanger, Fix new suspension hardware and hook it in hanger	No.	1793	17.93	1810.93	325.97	2136.90	50014861
	<b>j) Replacement of Twin cushion spacer cum damper suitable for 525 SqMM conductor</b>	No.	2391	23.91	2414.91	434.68	2849.59	50012083
	<b>k) Replacement of Twin Rigid spacer for jumper suitable for 525 SqMM conductor</b>	No.	2391	23.91	2414.91	434.68	2849.59	50012083
	<b>l) Replacement of Twin bushing type spacer suitable for 525 SqMM conductor</b>	No.	2391	23.91	2414.91	434.68	2849.59	50012083
3	Head loading charges for unapproachable tower locations excluding complete tower material.	Per Tower	5978	59.78	6037.78	1086.80	7124.58	50007929
4	<b>Fixing of Tower accessories.</b>							
	a) Fixing of Number Plate	No.	239	2.39	241.39	43.45	284.84	50004916
	b) Fixing of Danger Board	No.	239	2.39	241.39	43.45	284.84	50004917

	c) Fixing of Vibration Damper suitable for 0.1 to 0.5 ACSR conductor & 525 Sqmm. Cond.	No.	956	9.56	965.56	173.80	1139.36	50004028
	d) Fixing of Vibration Damper suitable for 7/3.15 mm Earth wire	No.	478	4.78	482.78	86.90	569.68	50010681
	e) Fixing of step bolt	No.	60	0.60	60.60	10.91	71.51	50008676
	f) Fixing of conical type bird guard	No.	598	5.98	603.98	108.72	712.70	50010316
	g) Fixing of anti climbing device i.e. barbed wire. (along with angles, nut bolts, drilling of holes if necessary etc.)	No.	1435	14.35	1449.35	260.88	1710.23	50010321
	h) Fixing of anti theft nut bolt							
	a) 16 mm Dia x 40 mm length	No.	60	0.60	60.60	10.91	71.51	50010730
	b) 16 mm Dia x 50 mm length	No.	60	0.60	60.60	10.91	71.51	50010730
	c) 16 mm Dia x 60 mm length	No.	60	0.60	60.60	10.91	71.51	50010730
	d) 16 mm Dia x 70 mm length	No.	60	0.60	60.60	10.91	71.51	50010730
	i) Fixing of phase plate	No.	239	2.39	241.39	43.45	284.84	50004918
	j) Fixing of PA rods suitable for 0.1 to 0.5 ACSR conductor & 525 Sqmm. Conductor.	No.	956	9.56	965.56	173.80	1139.36	50003751
5	<b>Replacement of rusted/damaged/missing members</b> including drilling , cutting, Fabrication, transportation etc.	Per No.	598	5.98	603.98	108.72	712.70	50007830
6	<b>Electric tack welding</b> (half round welding) to G.I. nut bolts of Tower from thread ends (Two spots to be welded to each nut bolt near thread end) and Painting the welded portion with two coats of Zink rich paint.	Per bolt	24	0.24	24.24	4.36	28.60	50003263
7	<b>Dismantling /Destringing of the conductor</b> with complete, dismantled material transported to site store as directed(With to be deleted)							
	a) Single Circuit Dead Line OR having other circuit live.	Rmt/Ph	36	0.36	36.36	6.54	42.90	50003204
	b) Single circuit of M/C tower having other circuit live	Rmt/Ph	48	0.48	48.48	8.73	57.21	50008830
8	<b>Restranging of the conductor</b> with complete, dismantled material transported to site store as directed(Dismantled to be deleted.)							
	a) Single Circuit Dead Line OR having other circuit live.	Rmt/Ph	48	0.48	48.48	8.73	57.21	50010123
	b) Single circuit of M/C tower having other circuit live	Rmt/Ph	60	0.60	60.60	10.91	71.51	50016346
9	<b>Replacement of rusted / damaged 'D' shackle / ball socket / hooks etc.</b> (Cost of replacement of insulator is assumed to be covered)							
	a) Suspension string, Pilot String for Jumper, Tension String .	No.	1076	10.76	1086.76	195.62	1282.38	50009957
10	<b>Tightening of Jumper Nut Bolts</b> at angle tower at both side jump i. e. 6 Nos. for one circuit of D/C or M/C Tower including replacement wherever necessary.	Ckt/ Tower	837	8.37	845.37	152.17	997.54	50011039

11	<b>Dismantling /Destrining of the Earth wire</b> with complete, dismantled material transported to site store as directed							
	a) single circuit & double circuit dead line.	Rmt/P h	19	0.19	19.19	3.45	22.64	50010121
	d) Double Circuit line & Multi Circuit line.	Rmt/P h	24	0.24	24.24	4.36	28.60	50010121
12	<b>Restrining of the Earth wire</b> with complete, dismantled material transported to site store as directed							
	a) single circuit, Double Circuit dead line.	Rmt/P h	24	0.24	24.24	4.36	28.60	50006744
	b) Double circuit line & multi Circuit line.	Rmt/P h	30	0.30	30.30	5.45	35.75	50016347
13	<b>Tree cutting / trimming.</b> Cutting of all trees, bushes, shrubs etc. within the corridor 35 mtr. of 220KV & 25 mtr of 110KV. Removed trees, branches, bushes should be removed and dumped away as directed.							
	a) Normal area	Per Span	2391	23.91	2414.91	434.68	2849.59	50009993
	b) Hilly area/ Dense Forest/ Creek	Per Span	3587	35.87	3622.87	652.12	4274.99	50009991
14	<b>Supply of clamps, connectors, Hardwares, Tower Accessories</b> etc. as per MSETCL approved drawings.							
	a) Palm to suit 0.4 ACSR conductor of size 100x100	No.	389.33	3.89	393.22	70.78	464.00	500003672
	b) Palm to suit 0.2 ACSR conductor of size 100x100	No/	379.26	3.79	383.05	68.95	452.00	500003812
	c) <b>Single T connectors( With nut bolts &amp; palm)</b> suitable for	No.						
	i) 0.1 ACSR Dog Conductor	No.	1399.00	13.99	1412.99	254.34	1667.33	500007128
	ii) 0.2 ACSR Panther Conductor.	No.	1399.00	13.99	1412.99	254.34	1667.33	500013776
	iii) 0.3 ACSR Goat Conductor	No.	1399.00	13.99	1412.99	254.34	1667.33	500021947
	iv) 0.35 ACSR Sheep Conductor	No.	1399.00	13.99	1412.99	254.34	1667.33	500021946
	v) 0.4 ACSR Deer Conductor.	No.	1645.00	16.45	1661.45	299.06	1960.51	500004437
	vi) 0.4 ACSR Zebra Conductor.	No.	1645.00	16.45	1661.45	299.06	1960.51	500000850
	vii)AAAC 525 SqMM Conductor	No.	1645.00	16.45	1661.45	299.06	1960.51	500008987
	d) <b>Repair sleeves</b> suitable for							
	i) 0.1 ACSR Dog Conductor	No.	365.00	3.65	368.65	66.36	435.01	500004745
	ii) 0.2 ACSR Panther Conductor.	No.	365.00	3.65	368.65	66.36	435.01	500000814
	iii) 0.3 ACSR Goat Conductor	No.	365.00	3.65	368.65	66.36	435.01	500009002

	iv) 0.35 ASCR Sheep Conductor	No.	412.00	4.12	416.12	74.90	491.02	500009048
	v) 0.4 ASCR Deer Conductor.	No.	412.00	4.12	416.12	74.90	491.02	500004439
	vi) 0.4 ASCR Zebra Conductor.	No.	412.00	4.12	416.12	74.90	491.02	500000822
	vii)AAAC 525 SqMM Conductor	No.	707.00	7.07	714.07	128.53	842.60	500000842
	<b>e) Twin 'T' connector (with nut bolts &amp; Palm)</b> suitable for							
	i) 0.1 ACSR Dog Conductor	No.	2887.00	28.87	2915.87	524.86	3440.73	500016734
	ii) 0.2 ACSR Panther Conductor.	No.	2887.00	28.87	2915.87	524.86	3440.73	500010182
	iii) 0.3 ASCR Goat Conductor	No.	2887.00	28.87	2915.87	524.86	3440.73	500021949
	iv) 0.35 ASCR Sheep Conductor	No.	2887.00	28.87	2915.87	524.86	3440.73	500021948
	v) 0.4 ASCR Deer Conductor.	No.	3397.00	33.97	3430.97	617.57	4048.54	500022010
	vi) 0.4 ASCR Zebra Conductor.	No.	3397.00	33.97	3430.97	617.57	4048.54	500012291
	vii)AAAC 525 SqMM Conductor	No.	3397.00	33.97	3430.97	617.57	4048.54	500016055
	<b>f) Mid span joint</b> suitable for							
	i) 0.1 ACSR Dog Conductor	No.	938.00	9.38	947.38	170.53	1117.91	500004744
	ii) 0.2 ACSR Panther Conductor.	No.	938.00	9.38	947.38	170.53	1117.91	500000813
	iii) 0.3 ASCR Goat Conductor	No.	938.00	9.38	947.38	170.53	1117.91	500004365
	iv) 0.35 ASCR Sheep Conductor	No.	938.00	9.38	947.38	170.53	1117.91	500009047
	v) 0.4 ASCR Deer Conductor.	No.	1132.00	11.32	1143.32	205.80	1349.12	500004438
	vi) 0.4 ASCR Zebra Conductor.	No.	1132.00	11.32	1143.32	205.80	1349.12	500009521
	vii)AAAC 525 SqMM Conductor	No.	1132.00	11.32	1143.32	205.80	1349.12	500004338
	<b>g) Jumper Cone</b> suitable for							
	i) 0.1 ACSR Dog Conductor	No.	493.00	4.93	497.93	89.63	587.56	500009024
	ii) 0.2 ACSR Panther Conductor.	No.	641.00	6.41	647.41	116.53	763.94	500008943
	iii) 0.3 ASCR Goat Conductor	No.	641.00	6.41	647.41	116.53	763.94	500009023
	iv) 0.35 ASCR Sheep Conductor	No.	641.00	6.41	647.41	116.53	763.94	500006221



	v) 0.4 ASCR Deer Conductor.	No.	987.00	9.87	996.87	179.44	1176.31	500006231
	vi) 0.4 ASCR Zebra Conductor.	No.	987.00	9.87	996.87	179.44	1176.31	500004603
	vii)AAAC 525 SqMM Conductor	No.	987.00	9.87	996.87	179.44	1176.31	500023424
	<b>h) S. S. Nut bolts.</b>	No.	89.00	0.89	89.89	16.18	106.07	500020772
	<b>i) G.I. Nut bolts.</b>	No.	44.00	0.44	44.44	8.00	52.44	500006320
	<b>j) Single Tension hardware with jumpercone</b> suitable for							
	i) 0.1 ACSR Dog Conductor	No.	4042.00	40.42	4082.42	734.84	4817.26	500009160
	ii) 0.2 ACSR Panther Conductor.	No.	4042.00	40.42	4082.42	734.84	4817.26	500000809
	iii) 0.3 ASCR Goat Conductor	No.	4042.00	40.42	4082.42	734.84	4817.26	500009044
	iv) 0.35 ASCR Sheep Conductor	No.	4488.00	44.88	4532.88	815.92	5348.80	500021072
	v) 0.4 ASCR Deer Conductor.	No.	4507.00	45.07	4552.07	819.37	5371.44	500006230
	vi) 0.4 ASCR Zebra Conductor.	No.	4507.00	45.07	4552.07	819.37	5371.44	500021440
	vii)AAAC 525 SqMM Conductor	No.	4631.00	46.31	4677.31	841.92	5519.23	500016053
	<b>k) Double Tension hardware with jumpercone</b> suitable for							
	i) 0.1 ACSR Dog Conductor	No.	9986.00	99.86	10085.86	1815.4 5	11901.31	500004743
	ii) 0.2 ACSR Panther Conductor.	No.	9986.00	99.86	10085.86	1815.4 5	11901.31	500000811
	iii) 0.3 ASCR Goat Conductor	No.	9986.00	99.86	10085.86	1815.4 5	11901.31	500009044
	iv) 0.35 ASCR Sheep Conductor	No.	9986.00	99.86	10085.86	1815.4 5	11901.31	500021073
	v) 0.4 ASCR Deer Conductor.	No.	11012.00	110.12	11122.12	2001.9 8	13124.10	500021074
	vi) 0.4 ASCR Zebra Conductor.	No.	11012.00	110.12	11122.12	2001.9 8	13124.10	500021439
	vii)AAAC 525 SqMM Conductor	No.	12118.00	121.18	12239.18	2203.0 5	14442.23	500013330
	<b>l)Single Suspension Hardware</b> Suitable for							
	i) 0.1 ACSR Dog Conductor	No.	3872.00	38.72	3910.72	703.93	4614.65	500004742
	ii) 0.2 ACSR Panther Conductor.	No.	3872.00	38.72	3910.72	703.93	4614.65	500000805

	iii) 0.3 ASCR Goat Conductor	No.	3872.00	38.72	3910.72	703.93	4614.65	500022006
	iv) 0.35 ASCR Sheep Conductor	No.	3872.00	38.72	3910.72	703.93	4614.65	500021945
	v) 0.4 ASCR Deer Conductor.	No.	4059.00	40.59	4099.59	737.93	4837.52	500003945
	vi) 0.4 ASCR Zebra Conductor.	No.	4059.00	40.59	4099.59	737.93	4837.52	500020275
	vii)AAAC 525 SqMM Conductor	No.	4246.00	42.46	4288.46	771.92	5060.38	500013331
	<b>m) Double Suspension Hardware</b> Suitable for							
	i) 0.1 ACSR Dog Conductor	No.	5725.00	57.25	5782.25	1040.8 1	6823.06	500004741
	ii) 0.2 ACSR Panther Conductor.	No.	5725.00	57.25	5782.25	1040.8 1	6823.06	500000807
	iii) 0.3 ASCR Goat Conductor	No.	5725.00	57.25	5782.25	1040.8 1	6823.06	500014399
	iv) 0.35 ASCR Sheep Conductor	No.	5725.00	57.25	5782.25	1040.8 1	6823.06	500009912
	v) 0.4 ASCR Deer Conductor.	No.	8480.00	84.80	8564.80	1541.6 6	10106.46	500019754
	vi) 0.4 ASCR Zebra Conductor.	No.	8480.00	84.80	8564.80	1541.6 6	10106.46	500018039
	vii)AAAC 525 SqMM Conductor	No.	8564.00	85.64	8649.64	1556.9 4	10206.58	500013332
	<b>n) Anti climbing device</b> i.e. barbed wire. (Including angles, nut bolts etc.)	set	5682.00	56.82	5738.82	1032.9 9	6771.81	500016294
	<b>o) PA rods</b> suitable for							
	i) 0.2 ACSR Panther Conductor.	No.	1545.00	15.45	1560.45	280.88	1841.33	500002879
	ii) 0.4 ASCR Zebra Conductor.	No.	2348.00	23.48	2371.48	426.87	2798.35	500002880
	<b>p) Tension hardware suitable for</b> <b>suitable earth wire</b>	No.	768.00	7.68	775.68	139.62	915.30	500016230
	<b>q) Suspension hardware suitable for</b> <b>suitable earth wire</b>	No.	768.00	7.68	775.68	139.62	915.30	500007148
	<b>r) Mid span joints suitable for suitable</b> <b>earth wire</b>	No.	256.00	2.56	258.56	46.54	305.10	500000793
	<b>s) Number Plate</b>	No.	297.00	2.97	299.97	53.99	353.96	500003465
	<b>t) Danger Board</b>	No.	357.00	3.57	360.57	64.90	425.47	500004550
	<b>u) Vibration Damper</b> suitable for							
	i) 0.2 ACSR Panther Conductor.	No.	881.00	8.81	889.81	160.17	1049.98	500002903
	ii) 0.4 ASCR Zebra Conductor.	No.	1028.00	10.28	1038.28	186.89	1225.17	500002904
	<b>v) Vibration Damper for suitable</b> <b>Earth wire</b>	No.	420.00	4.20	424.20	76.36	500.56	500001108
	<b>w) Anti theft nut bolts</b>	No.	105.00	1.05	106.05	19.09	125.14	500020734

	<b>x) Conical type bird guard</b>	No.	1049.00	10.49	1059.49	190.71	1250.20	500000713
	y) Twin cushion spacer cum damper suitable for 525 SqMM Conductor	No.	1312.00	13.12	1325.12	238.52	1563.64	
	z) Providing of Twin Rigid spacer for jumper suitable for 525 SqMM Conductor	No.	1312.00	13.12	1325.12	238.52	1563.64	
	z-i)Twin bushing type spacer suitable for 525 SqMM Conductor	No.	1312.00	13.12	1325.12	238.52	1563.64	
15	<b>Cold line cleaning (Manually) of disc insulators</b>							
	a) Suspension string	Per String	598.00	5.98	603.98	108.72	712.70	
	b) Cut point string	Per String	717.00	7.17	724.17	130.35	854.52	
	c) Chemical washing of insulator	Per String	3587.00	35.87	3622.87	652.12	4274.99	
16	<b>Revetment</b> with RCC and not in UCR Masonry, required at the location identified in ground patrolling as per drawing provided by MSETCL & as per the specifications of project schedule rates.	CuM	1674	16.74	1690.74	304.33	1995.07	50006741

**Note :-**

Rates are inclusive of GST taxes applicable, in case of supply of material.

Mobilization/De-mobilization charges are applicable on occasion basis, irrespective of days. These charges are applicable only for the deployed gang comprising minimum 15 Labours.

The Mobilization charges shall not be applicable for Non-Outage/Non-Breakdown activities.

Number of gangs to be deployed for a particular work will be at the discretion of engineer in charge, though the work involved seems to be small or less in quantity. It will be decided considering the quantum of work, geographical, weather and other R.O.W. conditions at that time. Head loading charges will be applicable only for the locations in hilly area which are not approachable by any vehicle. It will be applicable in plain area for tower location beyond 200 meters from the nearest spot approachable. It will be applicable for unapproachable tower locations due to rains. This will be in addition to mobilization charges as a special condition.

**Activity to be covered in PLANNED OUTAGE** - Any activity which is identified in advance and to be carried out in outage solely proposed for that particular work. For example-Replacement of STN with DTN, Replacement of faulty disc insulators.

**Activity to be covered in EMERGENCY** - Any activity which is not identified in advance and it is to be carried out in breakdown of equipments only For example- Failure of disc insulators, snapping of conductor, earthwire, bending of cross arm etc.

For the work of "Providing & Fixing of Clamps Connectors & Hardwares " the supply rates of this schedule may be considered for estimation purpose.

(Abhijit C Dhamale)  
**Executive Engineer**  
**EH VO&M Division Kolhapur**