

PROFORMA OF SCHEDULES:(ELECTRICAL WORKS)

**(Separate Performa for Civil, Electrical & Horticultural Works in case of Composite Tenders)
(Operative Schedules to be supplied separately to each intending tenderer)**

SCHEDULE 'A'

Schedule of quantities (as per PWD 3): Enclosed

SCHEDULE 'D'

Extra schedule for specific requirements/: As per tender documents document for the work, if any

SCHEDULE 'E'

Reference to General Conditions of contract: -

General Conditions of Contract for CPWD work – 2023 Construction Work with amendments issued up to date of submission of tender.

Name of work:	Renovation/Upgradation of Type-II- 01 Nos. and Type-III-05 Nos. Quarters at Special Bureau Rajkot. SH: Electrical work.
Estimated cost of work: -	₹9,41,474/-
(i) Earnest money: -	As per part 'A' of NIT
(ii) Performance Guarantee: -	
(iii) Security deposit: -	

SCHEDULE 'F'**GENERAL RULES & DIRECTIONS**

(i) Officer inviting tender	:	Executive Engineer, Rajkot Central Division, CPWD, Rajkot
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DEFINITIONS: -

(i)	CPWD Directorate	:	CPWD Directorate includes Director General / Special Director General / Additional Director General / CPM/ CA/Chief Engineer/CE-ED/PM/ SE/SE-PD/ Director (Horticulture)
2(v)	Engineer -in- Charge	:	Executive Engineer(E), Gandhinagar-I, CPWD, (for Electrical work)
2(viii)	Accepting Authority	:	As per part 'A' of NIT
2(x)	Percentage on cost of materials and Labour to cover all overheads and profits	:	As per part 'A' of NIT
2(xi)	Standard Schedule of Rates	:	Delhi Schedule of Rates (E&M)- 2025 (Electrical) with correction slips up to last date of submission of bid.
2(xii)	Department	:	Central Public Works Department
9(ii)	Standard CPWD Contract Form	:	General Conditions of Contract 2023 (GCC Construction Work-2023) CPWD Form-7 as modified & corrected up to previous day of last date of submission of the tender.

Clause 1

(i)	Time allowed for submission of Performance Guarantee from the date of issue of letter of acceptance	:	As per part 'A' of NIT
(ii)	Maximum allowable extension with late fee at 0.1% per day of PG amount beyond the period provided in (i) above.	:	As per part 'A' of NIT

Clause 2

Authority for fixing compensation under clause 2	As per part 'A' of NIT
Clause 2A	Not Applicable

Clause 5

Number of days from the date of issue of letter of acceptance for reckoning date of start	As per part 'A' of NIT
Time allowed for execution of work	As per part 'A' of NIT

Mile Stone Table:

Sr. No.	Description of Milestone (Physical Progress)	Period for Completion from date of start in months	Amount to be withheld In case of non-achievement of mile stone
	As per part 'A' of NIT		

NOTE:

1. Withheld amount shall be released if subsequent milestone is achieved within respective time specified. However, in case milestones are not achieved by the Bidder for the work, the amount shown against milestone shall be withheld.
2. Intending bidder may submit phasing of activities/ milestones based on their resources and methodology at the time of bidding corresponding to physical milestones/stages indicated in the above table. These shall be formed part of the agreement after approval of the accepting authority, otherwise it would be assumed that agency agrees with the above-mentioned physical milestones

Authority to decide:

(i)	Extension of time	As per part 'A' of NIT
(ii)	Rescheduling of milestones	As per part 'A' of NIT
(iii)	Shifting of date of start in case of delay in handing over of site	As per part 'A' of NIT

Clause 5

Schedule of handing over of site			
Part	Portion of site	Description	Time Period for handing over reckoned from date of issue of letter of intent
Part A	Portion without any hindrance	-	10 days
Part B	Portions with encumbrances	-	Not Applicable
Part C	Portions dependent on work of other agencies	-	Not Applicable

Clause 5.2

Nature of Hindrance Register (either Physical or Electronic)	Physical
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Clause 5.4

Schedule of rate of recovery for delay in submission of the modified programme in terms of delay days		
Sl. No.	Contract Value	Recovery (Rupees)
I.	Less than or equal to Rs 1 Crore	500

Clause 6

Computerized Measurement Book (CMB)/Electronic Measurement book

(i) Mode of Measurement	(CMB)
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Clause 7

Gross work to be done together with net payment /adjustment of advances for material collected, if any, since the last such payment for being eligible to interim payment Note: -Engineer in charge at his discretion may release monthly payment even at a lesser amount subject to availability of budget grants from client. But the contractor can not claim it as a matter of right and no interest payment as per Clause-7 is permitted unless the work executed is beyond value of Gross work done stipulated under clause 7 in schedule F and bill is pending in Division Office.	Rs. 3.00 lacs or reasonable part decided thereof by Engineer-in-charge for expediting the progress of work
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Clause 7 A:

Whether Clause 7 A shall be applicable –	: Yes –
	Note- No running Account Bill shall be paid for the work till applicable labour licenses, registration with EPFO, ESIC and BOCW welfare Board, whatever applicable are submitted by the contractor to the Engineer-in-charge.

Clause 10A

List of testing equipment to be provided by the contractor at site lab.	: HT & LT Megger, Earth Tester, Tong Tester, Thermometer, Vernier caliper and any other testing instrument if required.
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Clause 10B (ii)

Whether Clause 10 B (ii) shall be applicable	: No
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Clause 10C

Component of labour expressed as percent of value of work	: As per Part 'A' of NIT
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Clause 10CC

Applicable / Not Applicable

: As per Part 'A' of NIT

Clause 11

Specifications to be followed for execution of work	:	General Specifications for Electrical Works Part-I Internal – 2023 & Part-II External -2023, Heating, Ventilation & Air-Conditioning (HVAC) – 2024, Substation Part-IV 2013, (Wet Riser and Sprinkler System)Part V- 2020, Part VI Fire Detection and Alarm System – 2018, Part-VII DG set 2013, all as amended up to last date of submission of bid. Note: - 1. All above specifications shall be applicable along with all correction slips issued by authority of Director General, CPWD up to the last date of submission/uploading of Bid. 2. In case of discrepancy in mentioned items / description among any of the following two or more documents, the following order of preference shall be followed. If any item required for completing the work in any of the following documents but not in the order of preference below, shall be applicable and nothing extra shall be paid on this account. However, quantities mentioned in “Schedule of Quantities” shall have precedence among all the following documents for payment purpose. i. Description of Schedule of Quantities. ii. Particular Technical Specification and Special Condition, if any. iii. Commercial and Additional conditions or this work. iv. CPWD Specifications and with up to date corrections as on last date of submission of Bid v. Drawings. vi. Indian Standard Specifications of B.I.S. OR other International code in case IS code is not available. vii. Manufacturer catalogue & specifications viii. National Building Code 2016 ix. Sound Engineering practices. x. Decision of Engineer-in-charge xi. Site information
Type of work	:	Construction Work

Clause 12

As Per DG /CON/Construction 2023/03 dt. 06.12.2023

Clause 12.2

Deviation Limit beyond which clause 12.2 (c) shall apply	:	As per part 'A' of NIT
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Clause 16

Competent Authority for deciding reduced rates	:	As per part 'A' of NIT
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Clause 18

List of mandatory machinery, tools & plants to be deployed by the contractor at site	:	As per requirement at site and as per instructions of Engineer-in-charge.
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Clause 19 C

Authority to decide penalty for each default	Engineer in charge of respective discipline/ any other authority as notified by the CPWD Directorate.
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Clause 19 D

Authority to decide penalty for each default	Engineer in charge of respective discipline/ any other authority as notified by the CPWD Directorate.
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Clause 19 G

Authority to decide penalty for each default	Engineer in charge of respective discipline/ any other authority as notified by the CPWD Directorate.
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Clause 19 K

Authority to decide penalty for each default	Engineer in charge of respective discipline/ any other authority as notified by the CPWD Directorate.
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Clause 25

Conciliator	As per part 'A' of NIT
Arbitrator appointing Authority	As per part 'A' of NIT
Place of Arbitration	As per part 'A' of NIT

Clause 32(i): -Requirement of Technical Representative(s) and Recovery Rate.

Sl. No.	Minimum Qualification of Technical	Discipline	Designation (Principal Technical Representative)	Minimum Experience	Number	Rate at which recovery shall be made from the contractor in the event of not fulfilling provision of clause 36 (i)
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						Figures (in Rs. Per Month)	Words Per Month
As Per Part 'A' of NIT							

NOTE: Assistant Engineers retired from Government services that are holding Diploma will be treated at par with Graduate Engineers.

Diploma holder with minimum 10-year relevant experience with a reputed construction co. can be treated at par with Graduate Engineers for the purpose of such deployment subject to the condition that such diploma holders should not exceed 50% of requirement of degree engineers.

Clause 38

(i)	Schedule/ statement for determining theoretical quantity of cement and bitumen on the basis of Delhi schedule of Rate 2007 printed by C.P.W.D.	:	Not Applicable
(ii)	Variations permissible on theoretical quantities		
a)	Cement for works with estimated cost put to tender not more than Rs.5 Lakh.	:	Not Applicable
	Cement for works with estimated cost put to tender more than Rs.5 Lakh	:	Not Applicable
b)	Bitumen for all works	:	Not Applicable
c)	Steel Reinforcement and structural steel sections for each diameter, section and Category	:	Not Applicable
d)	All other material	:	Not Applicable

RECOVERY RATES FOR QUANTITIES BEYOND PERMISSIBLE VARIATION

Sl. No	Description of Item	Rates in figures and words at which recovery shall be made from the Contractor.	
		Excess beyond permissible variation	Less use beyond the permissible variation
---NIL---			

SECTION 1

ADDITIONAL TERMS & CONDITION

The work shall be generally carried out in accordance with tender specifications and the following specification rules

- a) CPWD General Specification for electrical work 2023 Internal – Part- I & External-II 2023 and as amended up to date.
 - b) Indian Electricity Act 2003 amended up to date
 - c) National Electrical Code
 - d) Indian Electricity Rule 1956 amended up to date
 - e) National Building Code 2005.
 - f) CPWD General Specification for Part VI Fire Detection and Alarm System – 2020.
1. All materials required to be used on works shall be got approved from the Engineer-in-charge well in advance.
 2. No T & P shall be provided.
 3. Earthing, cement concrete works and testing of the installation shall be done in presence of the Engineer -in-charge or his authorized representative.
 4. G.I. pipes shall be medium class as per ISI specification & shall be of single piece without any Joints.
 5. All debris at site shall have to be removed by the contractor before handing over the installation to the department.
 6. General arrangement of the drawing of switch board shall be got approved from Engineer-in-charge before commencement of its fabrication.
 7. The successful tenderer shall make his own arrangement for storage and watch and ward of materials whether the same brought by him or supplied by the department. He shall remain responsible for watch and ward of installation and other fittings till these are commissioned and handed over to the department.
 8. Cement required for the work shall have to be procured by the Contractor himself. Electrical Contractor will make recess in brick work by cutting chases for provision of conduits and metal boxes according to the elevation drawings for electrical services. Electrical contractor will fix the conduits and boxes and there after close the chases up to the surface of masonry work in cement mortar 1:4 (1 cement :4 sand). Thereafter surface of chases shall be plastered and finished by the contractor to ensure smooth and even surface. Nothing extra shall be paid to the contractor for above operations irrespective of whether the chases are carried out before or after plastering of the wall.
 9. Contractor is advised to visit the site of work to have an idea for the execution of work, failure to do so will not absolve him of responsibility to do the work as specified in agreement.
 10. All the light and fans points should be properly earthed with 1.5 sq. mm, FRLS PVC insulated copper wire.
 11. Termination of wiring inside the DB's and main board should be done by crimped Copper lugs connections, for which no extra payment will made.
 12. All metallic parts must be properly bonded to the earth. Earthing lugs shall be provided to all copper earth wires and shall be fixed whenever required by means of anodized bolts and nuts.
 13. Any damage made to wall ceiling etc. of the building made by the contractor shall have to be made good up to the original finish as per requirement within the tendered amount. Nothing extra will be paid on this account.

14. The quoted rate should be inclusive of all taxes, levies, works contract taxes, duties etc.
 15. Concealed metal boxes & modular accessories shall be of same make.
 16. Steel Fish wire of proper gauge shall be drawn in the conduit while laying in the slab or on wall.
 17. The shop drawing shall be got approved from the Engineer-in-charge before start of work.
 18. Modular accessories shall be of same make.

 19. The contractor shall use any of the following makes for use in the work as below after obtaining the approval of the Engineer-in-charge.
 20. Contractor shall warrantee for LED fittings for any manufacturing defect for a period of 5 year & Guarantee for driver & LED for a period of 5 years from the date of installation.
 21. Contractor shall submit the LED fitting test report compliance applicable standard test IES LM 79 & LM80 for Models supplied at site.
 22. The contractor must deploy qualified Engineer and electrical Supervisor having proper certificate as per I.E. rule. work carried out in supervision of Engineer of firm
 23. All materials brought to site should be got approved from the Engineer-in-Charge before being used. Test reports of all the materials should be given. Department reserve the right to check the genuineness of the materials.
 24. Labour laws as per the GCC 2023 must be strictly complied to.
 25. The contractor have to arrange his own T& P .
 26. Cutting of floors/walls etc included in the scope of work of agency.
 27. No material used more than one year old use by firm in any case .Agency have to submit the tax invoice to department in photocopy of original so that authenticity of bill can be done .
 28. Before start the work firm have to take proper permission with scheduled of working so that same can be conveyed to client department.
 29. During execution of work agency have to marked all the circuits at the DBs and switch board end.
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LIST OF PREFERRED MAKES OF MATERIALS

1	FRLS PVC Wire	:	Polycab/Havells/RR Kable/KEI/Finolex
2	Modular Switch / Socket / TV Socket / Regulator / Box / Blanking plate / All Accessories	:	Legrand (Arteor) / ABB (IVIE) / Honeywell (Orna)/ Schneider (Zencelo)
3	All LED Fittings	:	Philips / Jaquar/ Regent / Havells / Crompton
4	BLDC fan	:	Orient/Havells/Crompton/Atomberg
5	Exhaust fan / Fresh Air Fan	:	USHA / Crompton / Almonard / Havells
6	RCCB, MCB & DB's / Loose Wire Box	:	Siemens /Legrand / ABB / Schneider / L&T (Exora) known as Lauritz Knudson
7	MCCB	:	Siemens /Legrand / ABB / Schneider / L&T (Dsine) known as Lauritz Knudson
8	XLPE Aluminum armored cable	:	Havells / Polycab / Finolex / RR Kabel / KEI
9	DWC HDPE Pipe	:	Dura line / Rex / Gemini / Supreme
10	Call bell	:	Anchor/Havells
11	PVC Conduit and accessories (ISI Marked)	:	BEC/AKG/Asian/Precision
12	G.I. pipe (ISI Marked)	:	Asian/Jindal/Tata

Note:- Models of items of all fixtures should be got approved from the Engineer in charge well before placing any order to the OEM/its authorized dealer. The contractor/agency is required to submit all relevant test certificates documents and along with the proposal. The model along with sample should be approval by Engineer-in-charge before pacing any order and supply of same to the site. The decision of Engineer-in-charge is binding in this regard and no variation is acceptable.



केंद्रीय लोक निर्माण विभाग
कार्यालय झापन

सं.-महानिदेशक/अधीक्षण अभियंता(वे)टास/विधिघ/12
निर्माण भवन, नई दिल्ली

दिनांक 03.09.2019

पंचमी, शुक्ल पक्ष, भाद्रपद, 2076

विषय:- Release of Security Deposit after the warranty period of LED fittings/LED lamps

Various complaints have been received regarding stipulation for an additional Performance Guarantee over and above Performance Guarantee provided in the CPWD Works Manual in respect of tenders invited for procurement of LED Bulbs/LED Fittings through call of tenders.

All the field units are hereby directed to incorporate the following additional conditions in the NIT for the works which include SITC of LED Bulbs/LED Fittings:-

1. All the LED Bulbs/ LED Fittings shall be guaranteed for a period of 5 years.
2. 50% of the Performance Guarantee shall be refunded to the contractor soon after the completion of the work and recording of the completion certificate.
3. 50% of the Performance Guarantee shall be retained as Security Deposit.
4. 50% of the Performance Guarantee retained as Security Deposit plus 2.5% Security Deposit already deducted from running bills (total 2.5+2.5=5%) shall be refunded year wise proportionately.

(सी के तुलानी)

अधीक्षण अभियंता (वे)

तकनीकी अनुप्रयोग एवं मानक

सेवा में, (केवल केंद्रीय लोक निर्माण विभाग की वेबसाइट के माध्यम से)

सभी विशेष महानिदेशकों, अतिरिक्त महानिदेशकों, मुख्य अभियंताओं, मुख्य परियोजना प्रबंधकों, अधीक्षण अभियंताओं, परियोजना-प्रबंधकों, और कार्यपालक अभियंताओं, कोलोनिजि. को आवश्यक कार्रवाई हेतु।

प्रति : कार्यपालक अभियंता (सतर्कता) 32, कार्यालय JS & CVO, सतर्कता इकाई, निर्माण भवन, नई दिल्ली को उनके अपने पत्र संख्या 10/V-32/(A-307)/2018-VS-I के लिए 22/06/2018 के संदर्भ में जानकारी के लिए।

ह.

अधीक्षण अभियंता (वे)

तकनीकी अनुप्रयोग एवं मानक

SECTION 2
SPECIAL CONDITIONS FOR ELECTRICAL WORKS FOR
COMPOSITE TENDERS

1. The contractor shall have valid electrical license from competent authority in his name or he may associate appropriate contractor having valid electrical license as per NIT conditions.
2. Agency shall have to submit credential of the proposed associated agencies for verification and approval of the department in proforma at Annexure I. Consent letter of such selected agencies for association shall also be enclosed in the prescribed format (Annexure-II). Main agency may propose upto three names of eligible associates. The main contractor has to associate the eligible electrical contractor well before the start of the electrical work.
3. After obtaining concurrence of competent authority department for such association, the main agency shall finalize one associate for execution of the electrical component of the work
4. All technical discussions shall be attended by the associate agency and the main agency. Commercial/Technical submissions for the electrical works shall be signed and submitted by the associate agency along with the main agency. -
5. Price-bid for electrical component shall be submitted by the main agency.
6. Award of work shall be made by the Engineer-in-charge of the major component to the main agency for complete work.
7. Running payments shall be made by the Executive Engineer (E) in charge of the work to the main contractor. Main contractor shall ensure that payments for electrical works are made to the associate electrical agency within 15days of receipt of each running account payment. Non-compliance of above shall invite appropriate action. In absence of reasonable cause of delay in payment, the Engineer-in charge shall make payment directly to the associate electrical contractor. Such payments will be recovered from the main agency in next running account bill/Final bill.
8. Main contractor has to enter in agreement with his associate electrical contractor for the complete electrical work contained in part A & C of the agreement. Copy of such agreement shall be supplied to the Executive Engineer (Elect) in charge of the electrical work as well as the Executive Engineer in charge of major component within one month of the award of work or date of start of electrical works whichever is earlier.
9. The main contractor shall be entirely responsible and answerable for all the works done by his associated electrical contractor regarding their quality, adherence to the laid down specification, terms and conditions, warranty/guarantee etc and he shall be liable to bear any compensation that may be levied by the department under any of the clauses of the agreement.

10. The manufacturer's guarantee/warranty for all the electrical accessories shall be for minimum period of 12 months from the date of taking over of the installation by the department. Necessary documents of handing / taking over of the installation will be duly signed by the (both party) main contractor and the associate contractor. The main contractor will ensure that the maintenance during the guarantee period shall also be carried out by the associate electrical contractor.
11. The main contractor shall also give necessary general power of attorney under the contract to the associated electrical contractor to enable him to receive instructions from electrical engineers of the department at site, sign the site order book, bills MBs for acceptance of measurement and receive stipulated materials etc.
12. In case the main contractor wants to change the associate electrical contractor during the currency of the contract he shall obtain prior permission of the Engineer-In-Charge. The substitute should fulfill the requisite qualification as given elsewhere in the documents.
13. In the event of the concerned electrical associate not performing satisfactory or not completing the work, the department can also direct the main contractor to remove the electrical contractor deployed on the work and ask him to deploy another associate contractor who fulfills the eligibility conditions. The new associate contractor will be bound to execute the left over work without any loss of time or variation in cost to the department. After approval of the Engineer-In-Charge he shall enter into a memorandum of understanding as in earlier case.
14. The main contractor shall be responsible for coordinating the activities of all the works and will ensure progress of all works as per the laid down programme. The main contractor shall also arrange for proper storage of the electrical accessories at site and will be responsible for their watch and ward. No claim in this regard shall be entertained in this regard.
15. The contractor shall use any of the makes as per approved makes for use in the work after obtaining the approval of the Engineer-in-charge.
16. After the award of the work, the contractor has to take note of the inventory of electrical items as per agreement from the Assistant Engineer- in charge and conduit layout drawing pipe, cable lay out for external lighting drawing to be submitted to the Assistant Engineer (E) in charge well before the casting of slab for approval. The main contractor is responsible for necessary co-ordination in this regard.
17. The completion Certificate for the whole work can be issued only after the completion of the all the electrical work as per agreement and specification only.
18. Department reserves the full right to check the genuines of the material supplied at site. The materials should be brought to site only after getting it approved by the Engineer-in-charge well in advance. The test certificate, delivery challans for materials to be submitted along with material. If department feels that material to be tested by national test house or laboratories then the sample to be sent for testing. If the materials fails the testing then cost of testing should be borne by the contractor.
19. The drawings like conduit layout need to be got approved from Assistant Engineer in charge well before casting slab. The drawings should be signed by the site engineer of the contractor and to be submitted to the office well in time for approval.
20. All drawings like panels, electrical distribution drawing to be submitted well before execution of work.
21. Any delay in the above will be in the account of contractor only.

Annexure I

PROPOSAL FOR ASSOCIATING ELECTRICAL AGENCIES

We hereby propose the following electrical agencies as per details mentioned against each. Their consent letters are also attached as per Annexure II.

PROPOSAL FOR ASSOCIATING ELECTRICAL AGENCIES

We hereby propose the following electrical agencies as per details mentioned against each. Their consent letters are also attached as per Annexure II.

Sl. No.	Name of Electrical contractor	Category and class of registration in CPWD	Registration No.	Monetary Limit of Work	Validity of registration	Consent letter attached (Yes/No)
1						
2						
3						

Note: A copy of registration order shall be attached for each agency.

Contractor Signature

Annexure II

CONSENT LETTER

I/We hereby give my / our consent to work as electrical contractor till the completion of work and I/we will be responsible for necessary action to hand over the work and for rectification of defects and repair during the maintenance period. I/we will execute the work as per CPWD specification and addition conditions of the works.

I/we will also engage suitable Engineer for the work as per condition of work. I further certify that the above particulars pertaining to me are correct.

Signature of Electrical Contractor



**GOVERNMENT OF INDIA
CENTRAL PUBLIC WORKS DEPARTMENT**

PART-D

SCHEDULE OF QUANTITY CIVIL & ELECTRICAL

**O/o EXECUTIVE ENGINEER
CENTRAL PUBLIC WORKS DEPARTMENT
RAJKOT**