

**GOVERNMENT OF ANDHRAPRADESH  
SCHOOL EDUCATION DEPARTMENT**

Circular No. 1137575 / MBNN/DC/2020

Dated **22/04/2020**.

SUB: Mana Badi Nadu Nedu-Execution of the work "Electrification with fans and tube lights" --guidelines -issued-Regarding.  
REF: G. O. Ms. No. 87 of the School Education (Prog -II) department dated 30-11-2019.

Government vide the GO read in the ref cited have accorded administrative sanction for improving the School Infrastructure facilities in all the schools of Phase I under Mana Badi Nadu Nedu program.

2. The primary objective of this work is to provide fans and tube lights in all the class rooms in the school. Unless we do proper robust electrification, we cannot fulfil the primary objective. The life of the electrification work and fans should be 75 years. To suit to these requirements, we need to follow appropriate standards and specifications given under. The following guidelines shall be followed in taking up the work 'Electrification with fans and tube lights'.

- i. If there is no electricity for the school, the power company should be approached. And necessary costs shall be met from the program. However pending power charges for the school shall not be booked from this program. The same shall be met from school grant being given separately.
- ii. Concealed Conduit Wiring:
  - a. Concealed Conduit Wiring is the most common way of doing wiring in the present days. The same shall be followed.
  - b. Before laying the PVC pipes in the wall, chasing/chiselling/grooving shall be done in the wall with wall cutters. Avoid manual grooving to avoid damage to the walls.
  - c. Conduits (Pipes) shall be fixed inside the walls with approved clips to ensure proper routing and wiring.
  - d. The width of the groove shall be limited as per the number of pipes/conduits.
  - e. After fixing the pipes, boxes and accessories the groove surface shall be filled with cement mortar and chick mesh wrapped around the pipes.
  - f. In case of buildings where new RCC slabs/beams are laid, the pipes and boxes shall be provided in the slab portion/beam portion.
- iii. Surface Conduit Wiring: Wherever concealed wiring is not possible (Example: crossing of RCC columns, Beams, RCC slabs) go for PVC

- casing and capping wiring system or surface conduit wiring.
- iv. The switch boards shall be fixed at appropriate heights and at equal heights from the finished floor in the room.
  - v. All the class rooms shall be provided with 3 phase connection.
  - vi. Wherever fan hooks are not available in the roof slabs fan hooks shall properly welded to the slab reinforcement at equal spacing.
  - vii. Make of Tube Lights, Switches, Sockets, Ceiling Fans : Crompton / Philips / Havells / Legrand / Goldmedal / Policab / Bajaj / Wipro / Usha / GEC / Orient.
  - viii. The supply and fixing of fans will be done by the firms approved at state level through tender system.
  - ix. In case of primary / upper primary schools the HM shall identify the room where Smart TV to be installed for the purpose of english lab. In such room we need to put a separate switch/plug box close to the wall where TV to be fixed.
  - x. For the purpose of electrical pumps appropriate electrical arrangements shall be taken up near source and also near sump (in case of booster pump is used)
  - xi. All the items procured locally shall be checked and satisfied before being taken to the site :
    - a. Brand (as notified)
    - b. Rating
    - c. Specifications
    - d. Functioning at Standard conditions
    - e. Any other defects
3. The specifications of the materials to be used are furnished in the annexure.
  4. It is further to be noted that the supply and fixing of fans will be done by the firms approved at state level through tender.
  5. In case of the Demo schools procurement of fans and fixing may be taken up by the Parents committee, if the supply process gets delayed.
  6. The Parents Committee shall procure all other materials other than the fans in the market duly following the make and specifications and take up the fixing through Electrical Mastery (Electrical).
  7. As far as possible the electrician rate shall be finalised on turnkey basis excluding material cost. As far as possible avoid paying to electrician on daily wages.
  8. Hence all the DEOs, APCs and EEs shall make note of the guidelines and specifications of the material and ensure proper quality in taking up the Electrification with fans and tube lights work and complete them within the specified time. This work shall be started immediately if not started already.
  9. The District Collectors are requested to ensure the above guidelines are followed and quality is ensured in taking up Electrification works under Nadu Nedu.

ENCL: Earthing wire drawing

**VADREVU CHINAVEERABHADRU DU**  
**COMMISSIONER, SCHOOL EDUCATION (FAC)**

**To:-**

All the District Collectors

All District Education Officers in the state

All Additional Project Coordinators of SS in the state

All Executive Engineers executing Nadu Nedu works in the state.

Copy submitted to Principal Secretary to Government, School Education, AP, Velagapudi

Copy submitted to Principal Secretary to Government, MA&UD, AP, Velagapudi

Copy submitted to Principal Secretary to Government, PR&RD, AP, Velagapudi

Copy submitted to Principal Secretary to Government, SW&TW, AP, Velagapudi

Copy submitted to Principal Secretary to Government, BCW, AP, Velagapudi

Copy submitted to Advisor, Infrastructure, School Education, Patamata.

**Copy to:-**

The State Project Director, Samagra Shiksha.

The Managing Director, APEWIDC, Tadepalli.

The Engineer-in Chief, PRED, TWED, PH, RWS.

The Chief Engineer, APEWIDC and Samagra Shiksha.

Copy to Senior Technical Consultant, Samagra Shiksha, Patamata.

Copy to the OSD to Honorable Minister, Education Department, AP,

Copy to Mr D.Ramana M/S TCS with a request to put this circular in STMS

**Annexure**

S.No	Item	Specifications
1	Fans	Provide number of fans as per actual requirement depending on the room size, including existing fans and in any case not more than 5 nos (4+1) per class room. Fans shall be put in the verandahs also where ever such verandahs are considered as class rooms. Fans of 1200 mm (48")sweep, 380 RPM at 230 V with high speed having 3 blades and double ball bearing, 100% copper winding, down rod 300 mm length and 19.20 mm dia, with 3 years warranty.

2	Tubelights	Provide number of tube lights as per actual requirement depending on the room size room location, including existing tube lights and in any case not more than 5 Nos. (4+1) tube lights per Class room (1200 mm – LED 20 W) and 1 No. outside class room.
3	Sockets:	Provide 1 No. 15 A & 1 No. 6A plug socket per Class room and 1 No. outside class room. (notified Brand only).
4	Switches:	Modular Switches shall be used. 12 switch/18 switch boards may be installed depending on the actual requirement.
5	PVC Conduit pipes:	20mm diameter, 1.80mm thick in walls, and 25mm diameter 2.20 mm thick in slabs shall be used. [Make – Sudhakar / Finolex / Supreme]
6	Copper Multi Lead Wires	Only Flame-Retardant Low smoke (FRLs) wires shall be used - Make: Havells / Policab / Legrand / Gold medal / Finolex - Type of copper wires with multi leads: a.1.00 Sq. mm – 14 leads of 0.30 mm dia b.1.50 Sq. mm – 22 leads of 0.30 mm dia c.2.50 Sq. mm – 36 leads of 0.30 mm dia d.4.00 Sq. mm – 56 leads of 0.30 mm dia 6.00 Sq. mm – 84 leads of 0.30 mm dia
7	Distribution Boards	4 way TPN and 8 way SPN - Make: Havells / L & T/ Legrand / Gold medal / Standard / Anchor / ABB/-As per IS: 13032
8	Street Lights	LED 45 W / 60 W - 1 No. near Toilet, 1 No. near gate, 2 Nos near main building. - Make: Crompton/ Philips / Wipro / Havells / Bajaj / GE. The Street lights shall be water proof.
9	Exhaust fans	Exhaust fans shall be provided in toilets. Wherever required Exhaust fan may be provided in closed kitchen where sufficient ventilation is not available.

		- 300 mm Sweep with 900 RPM as per ISI
		- Make: Crompton / Almounard / Havells Turbo Force
10		Provide Independent earthing by excavating a trench to a depth of 2.10 mm in all soils, using 40mm dia, 'B' class GI pipe of 2.50 mts, length with Hume pipe ring and filling with 1:2 proportion of salt and charcoal in layers (i.e., 40 kg charcoal and 20 kg of salt ) and shall be executed as per drawing shown below : (** Note :Drawing is Enclosed separately to this circular)