



File No.: NESTS/Civil/EMRS Order/140/2021-22 (Pt.)
Comp No.: 21655

Date: 06.08.2024

To,

- i. CMD/MD/CEO,
B&R/EPIL/HSCL/NPCC/MTDC/MANIDCO/TCIL/WAPCOS.
- ii. Principal Secretary/Secretary/Commissioner, Tribal welfare department govt. of
Assam/Mizoram/Nagaland/Odisha/Rajasthan/MadhyaPradesh/Chhattisgarh and
Meghalaya.
- iii. Chief Engineer, CPWD, EMRS projects.

Subject: - Addition in preferred Make List for EMRS Construction.

- a. NESTS Letter No. NESTS/Civil/EMRS Order/140/2021-22 dated 09.08.2021, 25.05.2022 and
NESTS/Civil/EMRS Order/140/2021-22 (Pt.) dated 14.03.2023 (Para-6).
- b. NESTS Letter No. NESTS/Civil/EMRS Order/140/2021-22 (Pt.) dated 26.05.2023 and 22.09.2023.

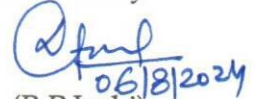
Sir,

Kind attention is invited towards the subjects cited above.

2. In this context, it has been decided that in addition to all the circulars issued in r/o preferred make list by NESTS, the preferred make lists of CPWD (Central Public Works Department) and NBCC (a Government of India Enterprise) for civil, electrical & mechanical items on "mutatis mutandis" basis could be adopted for EMRS construction.
3. Further, in the context of NESTS guidelines issued for F and KE/MTP it is reiterated that specifications are broad & indicative. Additionally, the procuring entities have to procure items strictly as per extant Government procedure in this regard.

This issues with the approval of competent authority.

Yours faithfully

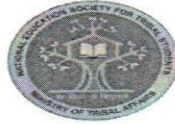

06/8/2024
(R P Joshi)

Executive Engineer

Copy to: -

1. EEs of respective CPWD division for n.a.
2. ZM/DGM respective PSUs for n.a.
3. Nodal Officer, respective state EMRS society for n.a.
4. PS to Commissioner NESTS.
5. PS to Addl. Commissioner NESTS.
6. DC Finance NESTS.
7. CTC-I, NESTS.
8. Guard File.

राष्ट्रीय आदिवासी छात्र शिक्षा समिति
(जनजातीय कार्य मंत्रालय के अंतर्गत
एक स्वायत्त संस्थान, भारत सरकार)
भू-तल, गेट नंबर-3ए, जीवन तारा बिल्डिंग,
संसद मार्ग, नई दिल्ली-110001
दूर. 011-23340280



National Education Society for Tribal Students

(An Autonomous Organization under
Ministry of Tribal Affairs, Govt. of India)
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Telephone No. 011-23340280
वेबसाइट/Website: www.tribal.nic.in
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F. No. NESTS/Civil/EMRS Order/140/2021-22

Date: 25.05.2022

To

MDs/CMDs/CEOs
(TCIL/WAPCOS/NPCC/MTDC/MANIDCO/HSCL/B&R and EPIL)

**Subject: -List of preferred makes of materials to be used in EMRS/EMBDS works (R- 2) –
reg.**

Reference: -

1. Prefer make List vide NESTS order no. 18015/11/2019-EMRS(Pt.) dated 09/08/2021(R1)
2. D.O.No S-20027/13/2020-TECH Issued by Ministry of Steel dated 12th January, 2021
3. OM Issued by the authority of DG, CPWD dated 17-02-2021

Sir,

I am directed to convey the approval of the competent authority in respect of Revision-2 to the list of preferred makes of materials (Civil) issued by this office vide order no. 18015/11/2019-EMRS(Pt.) dated 09/08/2021.

1. **Reinforcement Steel (TMT- FE 500) -** "Thermo Mechanically Treated (TMT) bars Fe-500 Grade conforming to IS 1786:2008 shall only be permitted. The PSU may approve the make/brand for use of TMT bars in EMRS Construction Work in light of the guidelines issued by Ministry of Steel vide DO letter Nos S-20027/13/2020-TECH dated 12.01.2021 addressed to Secretaries of various Ministries for procurement of Steel. Further PSU shall refer subsequent orders issued & procedure followed by CPWD & other Central Government Department for approval of TMT bars in this regard. While approval PSU ensure that approved brands/ make shall meet all quality parameters on Chemical Properties including Phosphorous and Sulphur percentage, Strength, etc. confirming to IS 1786:2008. The brands with consistent production quality having sufficient production capacity and fulfilling the aforesaid norms shall only be approved."
2. **Miscellaneous Civil & Electrical item (Revision-R-2) -** Preferred make list dated 09.08.2021 have been modified based on materials/brands preferred by CPWD and other reputed infrastructure govt organization confirming to relevant IS Stannard following established standard procedure (Revised Preferred Make Enclosed)
3. Furthermore, the NIT approving authority or the competent authority of PSUs may approve the other brand/make based on requirement on case-to-case basis provided **it confirm to relevant IS provision following established standard procedure and subject to full fill GOI norms, provisions and guidelines issued thereof.**

This issues with the approval of the competent authority
Encls.: As Above

(K C Meena)
Additional Commissioner

Copy to:-

1. Nodal Officer HQ, EMRS Works TCIL/WAPCOS/NPCC/MTDC/MANIDCO/HSCL/B&R and EPIL
2. Nodal Officer Zone/ State, EMRS Works TCIL/ WAPCOS/ NPCC/ MTDC/ MANIDCO/ HSCL/ B&R and EPIL
3. PS to Commissioner, NESTS, New Delhi
4. Guard File

LIST OF PREFERRED MAKE OF MATERIALS (CIVIL)

S. No.	Material /Article	Confirming IS Code	Manufacturers/ Agencies/ Brand make
1	Cement (OPC 43 grade)/PPC	IS 8112:1989/ IS 1489 (Part-1) 2015	A.C.C., Jaypee Cement, Ultratech, Shri Cement, Gujrat Ambuja Cement and cement Corporation of india., Dalmia InfraPro (Dalmia Bharat Cement)
2	Ready Mix Concrete	-	Ultra Tech (Ultra Tech Cement Ltd.), ACC (ACC Cements Ltd), RMC (India), RMC (India) Pvt. Ltd.
3	AAC Blocks	-	Xtralite (Ultra Tech Cement Ltd), Areocon (HIL), Nucon (Green Way building materials India Pvt. Ltd.), Magicrete (Magicrete Precast), NCL
4	Structural Steel	IS 2062:2011	SAIL, TISCO, RINL, JSW Steel Ltd, JINDAL
5	Stainless Steel	-	JINDAL SS Ltd (JSL), Salem (SAIL), SAIL (SAIL)
6	Corrugated GI Sheets	IS 277:2003	TATA, SAIL, JSW, JSPL , BHUSAN
7	Colour coated profile sheet	-	TATA, JINDAL
8	Aluminium extruded sections	IS 733:1983 & IS 1285:2002	Jindal, Hindalco, Indian Aluminium Co. NALCO
9	Aluminium plain sheets	IS 733:1983 & IS 1285:2002	Jindal, Hindalco, Indian Aluminium Co. NALCO
10	Factory made Machine pressed laminated flush door shutter	IS 2202 (Part 1) : 1999 and relevant IS code	Century, Greenply, Kitply, Duroply, Merino.
11	Block Board	IS 1659:2004	Century, Greenply, Kitply, Duroply, Merino.
12	Flush door shutter	IS 2202 (Part 1) : 1999	Greenply, Century, Kitply, Duroply Merino,
13	Boiling Water proof plywood, Block board, Commercial plywood	IS 303:1989	Greenply, Century, Kitply, Duroply Merino,
14	Aluminium door & window fittings	Relevant IS Code	Jyoti, Argent, Everest
15	PVC rigid foam sheet	-	Rajshri or equivalent
16	Hydraulic Floor Spring	IS 6315:1992	Dorma, Hardwin, Ozone, Dorset
17	Door Closure	IS : 3564	Dorma, Hardwin, Ozone, Dorset
18	Float Glass		Saint Gobain (Saint Gobain India Pvt. Ltd.), Modiguard (Gujarat Guardian Ltd.), Asahi (Asahi India Glass Ltd.)
19	SWR uPVC pipe & fitting	IS 4985:2000 & IS 14233:1999	Supreme, Finolex, Prince, Astral, Prakash, Ashirwad
20	CPVC Pipe & fittings	IS 16088: 2012,IS 15778:2007	Supreme, Finolex, Prince, Astral, Prakash, Ashirwad,
21	Ceramic glazed wall tiles	IS 13712:1993	Kajaria, Orientbell, Somany, NITCO, HR Johnson.
22	Vitrified Tiles	IS: 15622: 2006	Kajaria, Orientbell, Somany, NITCO, HR Johnson.
23	Bitumen VG-30, VG-10 etc.	IS:73:2013	As per particular specification of IOCL, BPCL, HPCL.
24	Admixtures	IS: 9103:1999	FOSROC, SIKKA, CICO Technologies Ltd., Pidilite
25	Mild Steel Tubes	IS: 1239:1990	As per IS Code
26	1st quality acrylic distemper (Ready mix)		Bison (Lewis Berger), Beauty (NEROLAC), Tractor Uno (Asian Paints)

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S. No.	Material /Article	Confirming IS Code	Manufacturers/ Agencies/ Brand make
27	Premium Acrylic smooth exterior Paint with silicon additives		ULTIMA (Asian paint), Premium Exterior Emulsion (Dulux), Weather coat long life 7 (Berger)
28	Paints	IS:101:1986	Lewis Berger, Asian Paints, Nerolac, Dulux
29	Steel/Wood Primer paints	IS:14177:1994	Lewis Berger, Asian Paints, Nerolac, Dulux
30	Factory made C.C. Interlocking Paver Blocks	IS: 15658:2006	NITCO, KK, NTC
31	Bitumen 85/25	IS:702:1988	HPCI, IOCL
32	Water Proofing Compound	IS:2645:2003	FOSROC, Dr. FIXIT, BASF, CICO, SIKKA
33	Crystalline Waterproofing Compound	IS 2645:2003	FOSROC, Dr. FIXIT, BASF. SIKA
34	G. I. Pipes	IS:1239	TATA, Jindal Hissar
35	PVC Water Storage Tanks	IS: 12701:1996	Sintex, Plasto
36	P.T.M.T. Accessories	IS:9763	Prayag, Prakash
37	Mirror		Saint Gobain (Saint Gobain India Pvt. Ltd.), Modiguard (Gujarat Guardian Ltd.), Asahi (Asahi India Glass Ltd.), Atul (Autl Glass Industries Ltd.)
38	Stainless Steel Sink	IS: 13983:1994	Hindware, NIRALI, CERA, JAYNA
39	Sanitaryware/ Chinaware	As per IS Code	Cera, Parryware, Hindware, Jaquar
40	C.P. Fittings and accessories for bathroom / toilets	IS:7784:1993	Jaquar, Gem, Parko, Hindware, Cera, Parryware
41	RCC Pipes	Confirming to IS Specification	Indian Hume Pipes (Indian Hume Pipe Ltd.), Jain & Co (Jain spun pipes Co)
42	SFRC Cover and grating	IS 12592(2002)	KK (KK Manhole and gratings Co Pvt Ltd.)
43	CI Manhole cover	IS 1726 (1991)	RPFM (M/s Raj Pattern Makers & founders Pvt. Ltd.), BIC (Bengal iron corporation), Neco (Jayaswal Neco Ltd)
44	Foot Rest (for manhole)		KGM (KGM Exports), Accurate Buildcon (AccurateBuildconcompany),Neco (Jayaswal Neco Ltd)
45	Water stops		Hydrotite (Sika India), Dr. Fixit (Pidilite industries), Ferrous Crete (Ferrous Crete (India) Pvt Ltd.)
46	Aluminium doors/windows sections	IS 733 & IS 1285	Hindalco (Hindalco Industries Ltd.), Jindal (jindal Aluminium Ltd.)
47	Glass Reinforced Concrete (GRC) Jali		Terrafirma (Terrafirma GRC Industries), Ecovision (Ecovision Industries Pvt Ltd.), Mahesh GRC (Mahesh Prefab Pvt Ltd.)
48	SS Doors & Windows Hardware & Fittings.		JINDAL, Dorma, KICH, Godrej, Ozone
49	Wall Putty		Dalmia, JK , Birla, Asian

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LIST OF PREFERRED MAKE OF MATERIALS (ELECTRICAL)

S. No.	Material /Article	Manufacturers/ Agencies/ Brand make
1	Engine	Ashok Leyland /Cummins/ Cater pillar /KOEL Mahindra & Mahindra /Escorts
2	Alternator	Kirloskar/KEL/Crompton Greaves (AL. series) / KEC / Stamford
3	Battery (Lead Acid /Mntc. Free)	Amara Raja / Exide/Crompton Greaves/Prestolite/Pace Setter/Standard/
4	HV Switchgear	Crompton / Kirloskar /Volta/ C & S Electric
5	LT Switchgear	L&T/ Schneider Electric / Siemens//Legrand/Havells
6	Vaccum Circuit Breaker	GE/Siemens/ C & S Electric
7	Transformer (Oil filled / Dry type)	ABB / Crompton Greaves / /Kirloskar /Siemens/ Alstom/Uttam
8	HT Panels	ABB/Siemens/L&T/Schneider/Kirloskar
9	Air Circuit Breaker	L&T/ Schneider Electric / Siemens/Havells
10	MCCB (Ics=Icu)	L & T/ Schneider Electric / Siemens/Legrand/Havells
11	MV/LT Panels	TTA/CPRI Fabricators with panels cleared by CPRI
12	SDF units	L&T/ Schneider Electric / Siemens/ Havells/ Legrand
13	Power Contactors	L&T/ Schneider Electric / Siemens/BCH/GE/ Power Controls
14	Change Over Switch	L & T/ HPL / Havells / Standard/Control & Switch gears
15	Air Brake Switch	National/Kiran/Pactil/Atlas/Power grid switchgears
16	Pin and Disc Insulator	Jayshree/WS/IEC/BHEL/Bharat Industries
17	11 KV Horn Gap Arrestor	Sahal/Pactil/GEC/SEW
18	Lightning Arrestor	Atlas/GE/Elaro/Lamco/International/Oblum/Elpro
19	Drop out Fuses	National/Kiran/Pactil
20	GI/MS Pipe (ISI Marked)	ATC / ATL / BST / GSI / ITC / ITS / IIA /JST / Jindal /TTA / Tata/Zenith
21	APFC Relay	L&T/ Schneider Electric / Neptune Ducati/Syntron/Trinity Electronics
22	IDMT Relay	AVKC/SEGC
23	C.T./P.T.	AE/MP/Marshall/Pactil/Kappa/L&T/Ashmor/Waco/Meco/Gilbert/Trio/Indotech/Indo coil
24	Selector Switch	L&T/Kaycee/IMP/Vaishno/Seizer/rass control
25	Indicating Lamp (LED Type) and Push But	Vaishno/Siemens/L&T/AE/IMP/Rass
26	Power Capacitors (MPP/APP)	Khatau/Junkar/L&T/EPCOS(Siemens)/ABB/Crompton/Schneider Electric/Neptune Ducati
27	Digital Panel Meters i/c Multi Function Meter	Conzerv/Schneider Electric/ AE/ Digitron / IMP/Meco / Rishabh /Universal/HPL/L&T/ABB
28	Ammeter/Voltmeter	AE/Universal/Rishabh/Kaycee/Meco/Enercom
29	Cold shrink HT/LT Cable Joint Kit	Denson / 3M(M-Seal)/ Raychem
30	Rubber Matting (ISI Marked)	Jyoti Rubber Udyog/Raychem/Padmini/Dozz
31	AVM Pads	Dunlop/Poly Bond
32	MCB/ Isolator/ELCB/RCCB/ Distribution Board	Crompton / Havells / MDS Legrand/ L&T / Schneider Electric/Siemens / Polycab/ C&S/ (makes of DBs and circuit breakers shall be same)
33	TPN Switches & HRC Fuses	Crompton / Havells / MDS Legrand/ L&T / Schneider Electric/Siemens / Polycab/ C&S/ (makes of DBs and circuit breakers shall be same)
34	PVC Conduits (ISI Marked) Colour : Ivory/Grey	AKG/Polycab/Avon Plast/Precision

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35	Steel Conduits (ISI Marked)	BEC/Bharat/Gupta/AKG/RMCON/Steel Krafcs
36	Piano/Modular Switches and Sockets	Legrand/Havells/Polycab/ Schneider/Anchor
37	Cable Tray	MEM/Bharti/Ratan/Slotco/Profab
38	Cable Glands	MCI, Comet/Jainson/Dowells
39	Thimbles/Lugs	Jainson/Dowells/Ascon
40	1.1 KV/11KV grade Al. Condr., XLPE insulated armoured cables (ISI Marked)	Finolex/Havells/Polycab//KEI
41	Fire Survival cable	Finolex/Havells/Polycab//KEI
42	Wires (PVC insulated copper conductor cable FRLS - ISI marked)/Telephone Cables / Submersible cables/Co-axial/TV cables	Finolex/Havells/Polycab//KEI
43	Fans and Exhaust fans (All Types)	Khaitan/Havells/Crompton/Orient/Bajaj/Usha/Polycab
44	LED Luminaries i/c street light fittings (ISI Marked)	Khaitan/Havells/Crompton/Orient/Bajaj/Usha/Polycab
45	LAN Cables	Panduit/Legrand/Schneider//Polycab
46	Centrifugal Pump	BE Power / Beacon /Crompton / Kirloskar / KSB
47	Submersible Pump	BE Power / Beacon /Crompton / Kirloskar / KSB
48	Motors	Crompton Greaves /Schneider Electric / Kirloskar/ Siemens
49	Motor Starter	L&T/Siemens/BCH/GE Power Control/Schneider Electric
50	Fresh Air Fans	Khaitan/Havells/Crompton/Orient/Bajaj/Usha/Polycab
51	Single Phase Preventer/Overload Unit	L&T / Minilec / Siemens
52	Timers	L&T / Minilec / Siemens /AE
53	Gate Valve/Foot Valve/NRV/Butter Fly Valve	Advance/Audco/Johnson Controls/Zoloto/Annapurna / Fountain /Kirloskar / Leader / Sant / Trishul/Kartar/Inter Valve
54	Single/Double Headed GM Landing Valve	New Age (Mumbai)/Safex/Ceasefire/Padmini/Life guard
55	Hydrant Valve	New Age (Mumbai)/Safex/Ceasefire/Kalpana/L&T valves Ltd./Life guard
56	Sprinkler/ Hose Reel & Hose Pipe (ISI Marked)	Safex/Agni/Newage/Ceasefire/Life Guard/Omex
57	Fire Extinguisher (ISI Marked)	Minimax/Lifeguard/Safeguard/Safex/Omex
58	Water Purifier	Eureka Forbes/Kent/Ion Exchange/LG
59	Inverter System	Sukam/Microtek/Luminous
60	Electrical Water Storage Heater	Racold/Crompton/Havells/Bajaj/Polycab

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राष्ट्रीय आदिवासी छात्र शिक्षा समिति
(जनजातीय कार्य मंत्रालय के अंतर्गत
एक स्वायत्त संस्थान, भारत सरकार)
भू-तल, गेट नंबर-3ए, जीवन तारा बिल्डिंग,
संसद मार्ग, नई दिल्ली-110001
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Email: nests-tribal@tribal.gov.in

F. No. NESTS/Civil/EMRS Order/140/2021-22

Date: 09.08.2021

To

The Nodal Officers of Construction Agencies
(TCIL/WAPCOS/NPCC/MTDC/MANIDCO/HSCL/B&R and EPIL)

**Subject: - List of preferred makes of materials to be used in EMRS/EMBDS works-R1-
regarding**

**Reference: - Prefer make List vide NESTS order no. 18015/11/2019-EMRS(Pt.) dated
04/03/2021(R1)**


Dear Sir,

I am directed to convey the approval of the competent authority in respect of revision-1 to the list of preferred makes of materials (Civil) issued by this office vide order no. 18015/11/2019-EMRS(Pt.) dated 04/03/2021.

S. No.	Material /Article	Conforming IS Code	Original Manufacturers/ Agencies/ Brand make	Revised Manufacturers/ Agencies/ Brand make
1	Steel Reinforcement	IS 1786:2008	Thermo mechanically treated bars Fe-500 Grade conforming to IS 1786:2008 from approved brands i.e. SAIL, TISCO, RINL	Thermo mechanically treated bars Fe-500 Grade conforming to IS 1786:2008 from approved brands i.e. SAIL, TISCO, RINL and Shyam Steel (Shyam Steel Industries Ltd)

This is issued with the approval of the competent authority

Encls.: As Above



K C Meena

(Additional Commissioner)

Copy to:

1. PS to Commissioner, NESTS, Jeevan Tara Building, New Delhi
2. Guard File

LIST OF PREFERRED MAKE OF MATERIALS (CIVIL) for EMRS/EMBDS Works (R1)

S. No.	Material /Article	Conforming IS Code	Manufacturers/ Agencies/ Brand make
1	Cement (OPC 43 grade)	IS 8112:1989	A.C.C., Jaypee Cement, Ultratech, Shri Cement/Bangur, Gujrat Ambuja Cement and Cement Corporation of India,
2	Steel Reinforcement	IS 1786:2008	Thermo mechanically treated bars Fe-500 Grade conforming to IS 1786:2008 from approved brands i.e. SAIL, TISCO, RINL and Shyam Steel (Shyam Steel Industries Ltd)
3	Ready Mix Concrete	-	Ultra Tech (Ultra Tech Cement Ltd.), ACC (ACC Cements Ltd), RMC (India), RMC (India) Pvt. Ltd.
4	AAC Blocks	-	Xtralite (Ultra Tech Cement Ltd), Areocon (HIL), Nucon (Green Way building materials India Pvt. Ltd.), Magicrete (Magicrete Precast)
5	Structural Steel	IS 2062:2011	SAIL, TISCO, RINL
6	Stainless Steel		Salem (SAIL), Jindal (JSW), SAIL (SAIL)
7	Corrugated GI Sheets	IS 277:2003	TATA, Essar, SAIL, JSW, BHUSAN
8	Colour coated profile sheet	-	TATA
9	Float Glass Profile sheet TATA (transparent)	IS 14900:2000	TATA, Modiguard, Saint Gobain
10	Aluminium extruded sections	IS 733:1983 & IS 1285:2002	Jindal, Hindalco
11	Aluminium plain sheets	IS 733:1983 & IS 1285:2002	Jindal, Hindalco
12	Factory made Machine pressed Pre-laminated flush door shutter	IS 2202 (Part 1) : 1999 and relevant IS code	Century, Greenply, Archid, Kitply, Duroply, Merino
13	Block Board	IS 1659:2004	Century, Greenply, Archid, Kitply, Duroply, Merino
14	Flush door shutter	IS 2202 (Part 1) : 1999	Greenply, Century, Archid, Kitply, Duroply, Merino
15	Boiling Water proof plywood, Block board, Commercial plywood	IS 303:1989	Greenply, Century, Archid, Kitply, Duroply, Merino
16	Aluminium door & window fittings	Relevant IS Code	Jyoti, Argent, Everest
17	PVC rigid foam sheet	-	Rajshri or equivalent
18	Hydraulic Floor Spring	IS 6315:1992	Dorma, Hardwin, Ozone, Dorma, Dorset
19	Door Closure	IS : 3564	Dorma, Hardwin, Ozone, Dorma, Dorset
20	uPVC doors, door frames and windows	-	Fenesta (Fensta DCM Shriman), Encraft (Encraft India Pvt. Ltd.), Duroplast (Duro Plast Extrusion Pvt. Ltd.)
21	Float Glass	-	Saint Gobain (Saint Gobain India Pvt. Ltd.), Modiguard (Gujarat Guardian Ltd.), Asahi (Asahi India Glass ltd.)
22	SWR uPVC pipe & fitting	IS 4985:2000 & IS 14233:1999	Supreme, Finolex, Prince, Astral, Prakash
23	CPVC Pipe (White Colour) & fittings	IS 16088: 2012, IS 15778:2007	Supreme, Finolex, Prince, Astral
24	Ceramic glazed wall tiles	IS 13712:1993	Kajaria, Orientbell, Somany, NITCO, HR Johnson,
25	Vitrified Tiles	IS: 15622: 2006	Kajaria, Orientbell, Somany, NITCO, HR Johnson,
26	Bitumen VG-30, VG-10 etc.	IS:73:2013	As per particular specification of IOCL, BPCL, HPCL.
27	Admixtures	IS: 9103:1999	FOSROC, SIKKA, CICO Technologies Ltd., Pidilite

KGP 09/08

28	Mild Steel Tubes	IS: 1239:1990	As per IS Code
29	Ist quality Acrylic Distemper (Ready mix)	-	Bison (Lewis Berger), Beauty (Nerolac), Tractor Uno (Asian Paints)
30	Premium Acrylic smooth exterior Paint withsilicon additives	-	ULTIMA (Asian paint), Premium Exterior Emulsion (Dulux), Weathercoat long life 7 (Berger)
31	Paints	IS:101:1986	Lewis Berger, Asian Paints, Nerolac, Dulux
32	Steel/Wood Primer paints	IS:14177:1994	Lewis Berger, Asian Paints, Nerolac, Dulux
33	Factory made C.C. Interlocking Paver Blocks	IS: 15658:2006	Nitco, KK, NTC
34	Bitumen 85/25	IS:702:1988	HPCL, IOCL
35	Water Proofing Compound	IS:2645:2003	FOSROC, Dr. FIXIT, BASF
36	G. I. Pipes	IS:1239	TATA, Jindal, Hissar
37	G. I. Fittings	-	UNIK
38	PVC Water Storage Tanks	IS: 12701:1996	Sintex, Plasto
39	P.T.M.T. Accesseries	IS:9763	Prayag, Prakash, Surya
40	Mirror	-	Saint Gobain (Saint Gobain India Pvt. Ltd.), Modiguard (Gujarat Guardian Ltd.), Asahi (Asahi India Glass Ltd.), Atul (Autl Glass Industries Ltd.)
41	Stainless Steel Sink	IS: 13983:1994	Hindware, NIRALI
42	Sanitaryware/ Chinaware	As per IS Code	Cera, Parryware, Hindware
43	C.P. Fittings and accessories for bathroom /toilets	IS:7784:1993	Jaquar, Gem, Parko, Hindware
44	RCC Pipes	-	Indian Hume Pipes (Indian Hume Pipe Ltd.), Jain & Co (Jain spun pipes Co)
45	SFRC Cover and grating	-	KK (KK Manhole and gratings Co Pvt Ltd.)
46	CI Manhole cover		RPFM (M/s Raj Pattern Makers & founders Pvt. Ltd.), BIC (Bengal iron corporation), Neco (Jayaswal Neco Ltd)
47	Foot Rest (for manhole)		KGM (KGM Exports), Accurate Buildcon (Accurate Buildcon company), Neco (Jayaswal Neco Ltd)
48	Water stops		Hydrotite (Sika India), Dr. Fixit (Pidilite industries), Ferrous Crete (Ferrous Crete (India) Pvt Ltd.)
49	Aluminium doors/windows sections	-	Hindalco (Hindalco Industries Ltd.), Jindal (jindal Aluminium Ltd.)
50	Glass Reinforced Concrete (GRC) Jali		Terrafirma (Terrafirma GRC Industries), Ecovision (Ecovision Industries Pvt Ltd.), Mahesh GRC (Mahesh Prefab Pvt Ltd.)
Note: Equivalent materials and finishes of any other specialized make may be used, in case it is established that the brandsspecified above are not available in the market but only after approval of the alternate brand by the Competent authority/NIT Approving authority.			

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LIST OF PREFERRED MAKES OF MATERIAL (ELECTRICALS) - for EMRS/EMBDS Works

S. No.	Material /Article	Manufacturers/ Agencies/ Brand make
1	Engine	Ashok Leyland /Cummins/ Cater pillar /KOEL/ Volvo Penta / Mahindra & Mahindra /Escorts / Eicher
2	Alternator	Kirloskar/NGEF/KEL/Crompton Greaves (AL. series) / KEC /Leroy Somer / Stamford/Jyoti Ltd
3	Battery (Lead Acid /Mntc. Free)	Amara Raja / AMCO / Hitachi / Exide/ Prestolite/ Standard/Crompton Greaves
4	HV Switchgear	Southern Switchgear/Biecco Lawrie / Crompton / Kirloskar /MEI /Voltas/ Jyoti Ltd.(Make of the accessories like meters. CTs, PT etc. shall be as provided by the manufacturer of the H.T.Panel)
5	LT Switchgears	L&T/ Schneider Electric / Siemens/ABB/hager/Legrand
6	Vaccum Circuit Breaker	GE/Siemens
7	Transformer (Oil filled / Dry type)	ABB / Schneider Electric /Andrew Yule /Bharat Bijlee / Crompton Greaves / EMCO /Kirloskar /Siemens/Voltas/Areva/Hammond
8	HT Panels	ABB/Siemens/L&T/Schneider/Kirloskar/System Control
9	Air Circuit Breaker	L&T/ Schneider Electric / Siemens
10	MCCB (Ics=Icu)	L&T/ Schneider Electric / Siemens/Legrand/Havells
11	MV/LT Panels	TTA/CPRI Fabricators with panels cleared by CPRI
12	SDF units	L&T/ Schneider Electric / Siemens/ HPL/Havells
13	Power Contactors	L&T/ Schneider Electric / Siemens/Lakshmi(LECS)/BCH/GE Power Controls
14	Change Over Switch	HPL / Havells / H-H Elcon/Standard/Control & Switch gears
15	Air Break Switch	National/Kiran/Pactil/Atlas/Power grid switchgears
16	Pin and Disc Insulator	Jayshree/WS/IEC/BHEL/Bharat Industries
17	11 KV Horn Gap Arrestor	Sahal/Pactil/GEC/SEW
18	Lightning Arrestor	Atlas/GE/Elaro/Lamco/International/Oblum/Elpro
19	Drop out Fuses	National/Kiran/Pactil
20	G.I. Wire/Strip	Hot dippeed Galvanized
21	APFC Relay	L&T/EPCOS(Siemens)/ Schneider Electric / Neptune Ducati/Syntron/ABB/Trinity Electronics
22	IDMT Relay	AVKC/SEGC
23	C.T./P.T.	AE/MP/Marshall/Pactil/Kappa/L&T/Ashmor/Waco/Meco/Gilbert/Trio/Indotech/Indo coil
24	Selector Switch	L&T/Kaycee/IMP/Thakoor/Vaishno/Seizer/rass control
25	Indicating Lamp (LED Type) and Push Buttons	Vaishno/Siemens/L&T/AE/IMP/Rass control/Crompton/Kaycee/BCH/EMCO
26	Power Capacitors (MPP/APP)	Khatau Junkar/L&T/EPCOS(Siemens)/ABB/Crompton/Schneider Electric/NeptuneDucati
27	Digital Panel Meters i/c Multi Function Meter	Conzerv/Schneider Electric/ AE/ Digitron / IMP/Meco / Rishabh /Universal/HPL/L&T/ABB
28	Ammeter/Voltmeter	AE/Universal/Rishabh/Kaycee/Meco/Enercom
29	Cold shrink HT/LT Cable Joint Kit	Denson / 3M(M-Seal)/ Raychem
30	Rubber Matting (ISI Marked)	Jyoti Rubber Udyog/Raychem/Padmini/Dozz
31	AVM Pads	Dunlop/Poly Bond
32	MCB/ Isolator/ELCB/RCCB/ Distribution Board	Crompton / Havells / Indokopp / MDS Legrand/ L&T / Schneider Electric/Siemens /Standard/ C&S/ABB/HPL (makes of DBs and circuit breakers shall be same)
33	TPN Switches & HRC Fuses	Crompton / Havells / Indokopp / MDS Legrand/ L&T / Schneider Electric/Siemens / Standard/ C&S/HPL
34	PVC Conduits (ISI Marked) Colour : Ivory/Grey	AKG/BEC/Avon Plast/Precision/GM/Clipsal
35	Steel Conduits(ISI Marked)	BEC/Bharat/Gupta/AKG/RMCON/Steel Krafts
36	Piano/Modular Switches and Sockets	Legrand/MK/Havells/Anchor

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37	Cable Tray	MEM/Bharti/Ratan/Slotco/Profab
38	Cable Glands	MCI, Comet/Jainson
39	Thimbles/Lugs	Jainson/Dowells/Ascon
40	1.1 KV/11KV grade Al. Condr., XLPE insulated armoured cables (ISI Marked)	Finolex/Havells/Polycab//KEI/Universal/Gloster
41	Fire Survival cable	KEI/Polycab/RR Kable/Havells
42	Wires (PVC insulated copper conductor cable FRLS - ISI marked)/Telephone cables/Submersible cables/Co-axial/TV cables	Finolex/Havells/Polycab/Anchor/RR kabel/L&T
43	Fans and Exhaust fans (All Types)	Khaitan/Havells/Crompton/Orient/Almond/B ajaj
44	LED Luminaries i/c street light fittings (ISI Marked)	Phillips/Havells/Wipro/Crompton Greaves/Bajaj/Osram
45	LAN Cables	Panduit/Legrand/Belden/Schneider/Molex/Extreme/Systimax(C OMMSCOPE)
46	Centrifugal Pump	BE Power / Beacon /Crompton / Jyoti / Kirloskar / KSB
47	Submersible Pump	Crompton / BE Power /Kirloskar / KSB
48	Motors	ABB/ Bharat Bijlee / Crompton Greaves /Schneider Electric / HBB / Kirloskar /Siemens/Jyoti Ltd
49	Motor Starters	L&T/Siemens/BCH/ABB/MEI/GE Power Control/Schneider Electric
50	Fresh Air Fans	GE / Khaitan/Almonard/Crompton
51	Single Phase Preventer/Overload Unit	L&T / Minilec / Siemens / Zerotrip
52	Timers	L&T / Minilec / Siemens / Telemecanique/AE
53	GI/MS Pipe (ISI Marked)	ATC / ATL / BST / GSI / ITC / ITS / IIA /JST / Jindal /TTA / Tata/Zenith
54	Gate Valve/Foot Valve/NRV/Butter Fly Valve	Advance/Audco/Johnson Controls/Zoloto/Annapurna / Fountain /Kirloskar / Leader / Sant / Trishul/Kartar/Inter Valve
55	Single/Double Headed GM Landing Valve	New Age (Mumbai)/Safex/Ceasefire/Padmini/Life guard
56	Hydrant Valve	New Age (Mumbai)/Safex/Ceasefire/Kalpna/L&T valves Ltd./Life guard
57	Gauges	Feibig / H.Guru / Pricol
58	Controls	FLICA / Honeywell / Indfoss / Penn-Danfoss / Ranco / Ranutrol / Sporland
59	Pressure Guage	H Guru/Fiebig
60	Fine Filters	Anfiltra Effluent / ARW / Athlete/Airtake/ Dyna / Kirsloskar/ Puromatic/Purafill/ Purolator / Tenacity
61	GI Sheet	HSU Jindal / National / Nippon Denro /Sail / Tata
62	Heat Detector	Appollo / Chemtron/ Edward / Fenwal/Hochiki / Nitton /System Sensor/Wormald/Honeywell Essar/Notifier
63	Ionization Detector	Appollo / Cerebrus / Edward / /Fenwal /Hochiki / Nitton / System Sensor /Wormald
64	Photo Electric Smoke Detector	Appollo / Cerebrus / Edward / Fenwal/Hochiki / Nitton / Wormald
65	Fire Panel (Microprocessor based)	Agni Instruments / Agni Devices/ Aruna Agencies/ Carmel Sensor / Ravel Elect./Honeywell Essar/Notifier/Navin Systems
66	Sprinkler/ Hose Reel & Hose Pipe (ISI Marked)	Safex/Padmini/Ge Tech/Agni/Newage/Ceasefire/Life Guard/Omex
67	Fire Extinguisher (ISI Marked)	Minimax/Lifeguard/Safeguard/Safex/Omex
68	Water Purifier	Eureka Forbes/Kent/Ion Exchange/LG
69	Inverter System	Sukam/Microtek/Luminous
70	Electrical Water Storage Heater (Geyser)	Racold/Crompton/Havells/Ditz
Note: Equivalent materials and finishes of any other specialized make may be used, in case it is established that the brands specified above are not available in the market but only after approval of the alternate brand by the Competent authority/NIT Approving authority.		

KAY
09/08

राष्ट्रीय आदिवासी छात्र शिक्षा समिति
(जनजातीय कार्य मंत्रालय के अंतर्गत
एक स्वायत्त संस्थान, भारत सरकार)
भू-तल, गेट नंबर-3ए, जीवन तारा बिल्डिंग,
संसद मार्ग, नई दिल्ली-110001
दूर. 011-23340280



National Education Society for Tribal Students

(An Autonomous Organization under
Ministry of Tribal Affairs, Govt. of India)
Ground Floor, Gate No.3 A, Jeevan Tara Building,
Parliament Street, New Delhi-110001
Telephone No. 011-23340280
वेबसाइट/Website: www.tribal.nic.in
Email: nests-tribal@tribal.gov.in

File: No: NESTS/Civil/EMRS Order/140/202122(Pt.)

Date: 22.09.2023

To,

CMD/MD/CEO/Chief Engineers of CPWD respective regions entrusted with EMRS work.
B & R/EPIL/HSCL/NPCC/MTDC/MANIDCO/TCIL/WAPCOS.

Sub: Partial modifications in guidelines in r/o Furniture(F) and Kitchen Equipment's/Machinery Tools & Plants (KE/MTP) of EMRS-reg.

Dear Sir,

In partial modification of NESTS Order dated 26.05.2023 regarding Furniture (F) and Kitchen Equipment's/Machinery Tools & Plants (KE/MTP), with a view to expedite the completion of EMRS, it has been decided that Construction Agencies (CA) i.e PSUs/CPWD/State Societies may include the budget provision for procurement of Furniture (F) & KE/MTP in their DPR of Single Phase/Phase-II or may submit the budget demand to procure above items as per GFR guidelines.

2. Item wise requirement with broad indicative specifications along with sample photographs are enclosed at Annexure 'A'. Detailed specifications and quality aspects of required items shall be finalized and approved by the concerned PSUs/CPWD/State Societies within the budget i.e., Rs 1.25 crore for furniture (F) and Rs 25 lakhs for KE/MTP items per EMRS.

3. However, PSUs/CPWD/State Societies shall ensure that above items are procured from the reputed brands/manufacturers who have sufficient experience and supplied furniture items in Govt. institutions, certifying the conditions that they shall have registered service centre in the respective State. Further the supplied furniture shall carry On-site service warranty of minimum 03 years from the date of installation. Further PSUs/CPWD/State Societies shall check samples of major items for conformance of specifications and got approved before going for bulk order.

4. In respect of DPR of Single Phase/Phase-II, where the provision of furniture (F) and KE/MTP items are not included. PSUs/CPWD/State Societies shall submit the budget demand for procurement of above items to NESTS for approval A/A & E/S.

This issues with the approval of competent authority.

Encl.: Annexure 'A'.

Yours Sincerely,

(R.P Joshi)

Executive Engineer








Copy to:

1. PS to Commissioner NESTS.
2. PS to Addl Commissioner NESTS.
3. DC Finance NESTS.
4. Guard Files.

NESTS/Civil/EMRSOrder/140/2021-22(Pt.)









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Abstract of Furniture

Item No	Specification	Items	Sample Image
1	<p>Knock down class room dual desk is specially designed for rugged use. The desk are made of pressed formed MS CRCA section & CRCA tube fitted with pre laminated Particle board top, seat & back with Machine pressed PVC egde banding 2 mm thick glued with industrial adhesive and diffused with board monolithically . Hanger for water bottle and bag. Space for keeping pen, pencil and scale. The overall appearance of the product shall be as per indicative potographs attached:</p> <p>DESK TOP –18mm Both Side laminate(BSL) PreLam Partical Board 400 mm wide BENCH TOP – 18mm BSL PreLam Partical Board 330 mm wide FRONT SHELF – 18mm BSL PreLam Partical Board 300(Wide)mm. BENCH BACK – 18mm BSL PreLam Partical Board 250(W)mm. Modesty Panel – 18mm BSL PreLam Partical Board 300 (W)mm.</p> <p>Supporting Understructure- Left Hand and Right Hand FRAME consisting of vertical, horizontal and Cross Member made up of 25 x 1.2 mm outer dia ERW tube confirming to IS Grade 4923 and shall be finished with epoxy polyster powder coated finish with DFT 50-60 Micron confirming IS 13871:1993. The support system of Bench and Shelf shall also made up of made up of 25 x 1.2 mm outer dia ERW tube confirming to IS Grade 4923 and shall be finished with epoxy polyster powder coated DFT 50-60 Micron confirming IS 13871:1993.. Resting support plate made of Table top , provided on the top of vertical members shal be made up of 3mm Thk CRCA sheet Conforming IS code 513. Legs shall be fitted with PVC Leveler. Construction is fully welded with MIG welding and assembled using M6 trilobularscrews(As per DIN 7500)with Zn blue plating. Compact top, seat and back panels are assembled using M6 Countersunk Trilobular screws(as per DIN 7500) with Zn Black Plating (As per IS 1573:1986).</p>	Duel Desk	
1(a)	Dual Desk :Overall Size 1100 (W) x 930-950(D) x 650 (H) - Desk Depth 390-400 mm. Seat Height 375 mm for Classs 6-8)		
1(b)	Dual Desk-(Overall Size 1100 W x 940-975(D)x 750 H - Desk Depth 400 mm. Seat Height 450 mm for Classs 9-12)		
2	<p>Supply and installation of Office table as per approved design and as directred by Engineer-in-charge</p> <p>Work Top - Work top shall be made 25mm thick Pre-lam MDF board confirming to IS 12406:2003 with post forming on front , back and machine pressed PVC egde banding 2 mm thick glued with industrial adhesive and diffused with board monolithically on other two sides</p> <p>Understructure- C-type leg shall be made of 50X50X1.6mm thick vertical member and 40x40x1.6mm thick M.S. pipe of Horizontal/Cross member confirming IS-Grade 4923 and shall be finished with epoxy polyster powder coated DFT 50-60 Micron. Legs shall be fitted to the ground with M8 screw leveler with the height adjustment up to 12mm to 15mm.Cross members shall be mounted by end brackets made of 3mm thick CRCA sheet confirming IS 513: 2008 and finished with epoxy polyster powder coated DFT 50-60 Micron confirming IS 13871:1993.</p> <p>Wire management - Electrical wires shall be carried from horizontal/ vertical duct made of 0.7mm CRCA sheet confirming to IS 513:2008. Switch Plate or Cromet depending upon requirement shall also be provided for electrical/LAN connection on table top.</p> <p>Modesty Panel -Modesty Panel of height 450 mm shall be made of 1.5mm thick CRCA sheet confirming to IS 513: 2008 and shall be finised with epoxy polyster powder coated DFT 50-60 Micron.</p> <p>Storage body- Storage top shall also be made of 25mm thick Pre-lam MDF board confirming to IS 12406:2003 with post forming on two sides and machine pressed PVC egde banding 2 mm thick glued with industrial adhesive and diffused with board monolithically on other two sides. The body of storage units shall be made of 0.8mm thick CRCA Sheet and skirting shall be of 1.2mm thick CRCA sheet confirming to IS 513: 2008 finished with epoxy powder coated of DFT 50-60 Micronconfirming IS 13871:1993. Internal Shelves shall be also made up of 0.8mm CRCA sheet confirming to IS 513: 2008 and shall be mounted with the Metal shelf support pin made of 2mm thick CRCA sheet with Nickel or Chrome plating. M10 screw leveler is given with height adjustment up to 12mm to 15mm.</p>	Principal & Vice Principal Table	
2a	Table of Size 1800 W x 750 D x 750 H with Side Storage of Size 900W x 450W X 750H and Back Storage 1800 W x 450 D x 750H	Principal Table	
2b	Table of Size 1650 W x 750 D x 750 H with Side Storage of Size 900W x 450W X 750H and Back Storage 1800 W x 450 D x 750H	Vice Principal Table	
2c	Office table with overall Size of desk 1350 x 750 x 750 mm & Side Storage Unit of size 900 x 450 x 750 mm	Office Table	
3	Office Table made of Pre-laminated table top of size 1199 X 590 X 735 mm with one drawer unit made of 0.5mm thick CRCA sheet. The table top shall be supported over legs consists of MS ERW round tube of 25.4 x 1.2mm and Cross Horizontal Members including Leg rest of 25.4 x 1.2 mm ERW tube. All steel components be shall be finised with epoxy polyster powder coated DFT 50-60 Micron.	Teacher's table	
4	<p>Supply and installation of 12 Seater Meeting Table of overall size 3600 x 1350 (Avergae) x 750 mm (Knock down construction). Table Top and Gable End shall be made of 25mm thick Pre-Laminate Partical Board with 2mm thick Machine pressed PVC edge banding glued with industrial adhesive and monolithically diffused.</p> <p>Supporting Understrucure consists of 2 Metal C Legs on either ends of table support frame made of 50 x 50 x 1.6 mm MS ERW tube and One number Wire Carrier leg at middle of 50X50X1.6 mm. 4 numbers Horizontal connector of 40mm X 40mm X 1.6mm thick MS Pipe between supporting vertical legs. All The MS Pipes and Sheet shall be finished with epoxy powdercoated of DFT 50-60 Micron. C typed metal legs shall be kept 150 mm inside from from end of table. WIRE MANAGEMENT - The Vertical (snake) & Horizontal(cable tray) wire carriers are placed below worktop, made up of CRCA with epoxy powder Coating & Fixed to the understructure with specially designed brackets. Provision of placing switch plates/Cromet in the cable tray .</p>	Meeting Table	







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	Supply and Installation of Library Table in sizes of 2400 L x 900 W x 750 H mm consisting of following specification:- Work Top - Work top shall be made 25mm thick Prelam (One Side laminated) particle board conforming to IS 12823: 1990 post formed edge moulding on two sides and 2 mm thick Machine pressed PVC edge banding glued with industrial adhesive and monolithically diffused with board on other two sides. Understructure Supporting frame consists of two Metal C Legs on either ends of table made up of 50X50X1.6 mm and are joined by two numbers Horizontal connector made of 40mm X 40mm X 1.6mm thick MS Pipe between supporting vertical legs. All Metal Pipes shall conform to IS 4923 and steel plates are made up of CRCA sectionm pconfirming to IS 513 and shall be shall be finished with epoxy polyster powder coated DFT 50-60 Micron. C typed metal legs shall be kept 150 mm inside from from end of table. Legs shall be fitted to the ground with M8 screw leveler with the height adjustment up to 12mm to 15mm(Payment Shall be per running metre length)	Library Table	
6	Supply and Istallation of Computer Work Station of unit Size 750 mm X 600 mm X 750 mm. Work Top- Work top shall be made 25mm thick Prelam particle board conforming to IS 12823: 1990 with post formed edge moulding on one side and 2 mm thick Machine pressed PVC edge banding glued with industrial adhesive and monolithically diffused with board on other three sides. Understructure supporting frame consist of Metal C Legs type made up of 50 x 50 x 1.6 mm and Wire Carrier leg of 50X50X1.6 mm in placed alternately and are connected with horizontal cross connectors of of 40mm X 40mm X 1.6mm thick MS Pipe between supporting vertical legs. The MS Pipes shall be finished with epoxy powdercoated with DFT of 50-60 Micron confirming to IS 13871:1993. Legs shall be fitted to the ground with M8 screw leveler with the height adjustment up to 12mm to 15mm. Wire management-The Vertical /Electrical duct & Horizontal Cable tray (wire carriers) are made of CRCA section & fixed to the understructure below worktop with specially designed brackets. Provision for fixing Switch plates are provided in the cable tray for easy access through wire manganer or PVC grommet. Screens / privacy panel: - Screen height will be 300 above work-top made of prelam particle board/White Board alternatively as approved by Engineer-in-Charge.	Computer Work Station	
7	Supply and Istallation of Library Open book Shelf (Single Side)of Sizes 1800 mm x 900 mm x 316 mm body made up of of 0.8mm thick CRCA Sheet and skirting of 1.2mm thick CRCA sheet conforming to IS 513: 2008 with epoxy powder coated finish (DFT minimum 50-60 micron). Shelves shall also be made up of 0.8mm CRCA sheet conforming to IS 513: 2008 and fixed with CRCA sheet brackets of approved design . Number of adjustable shelf shall be five with six loading levels . Load bearing capacity of the shelf shall be 30Kgs UDL. The construction shall be aesthetically appealing completely welded. M10 screw leveler is given with height adjustment up to 12mm to 15mm	One Side book Shelf	
8	Supply & Placing of Glassdoor Storage of Size 916mm(W)x486mm(D)x1980mm(H). It should have shelf thickness of 0.7 mm, Back thickness of 0.8mm, Door thickness of 0.8mm (high yield strength) and all other components shall have a thickness of 0.9mm. These components shall be made of CRCA sheet 'D' grade high yield strength as per IS:513. The glass door storwel shall have a brass handle and a 2 way locking mechanism with shooting bolt. It should have a height wise adjustable shelf mounting which shall have a Uniformly Distributed Load Capacity of max 40 Kg. It should also have a M10 Screw type Leveller with Hex plastic base.All metal components would be epoxy polyster powder coated DFT 50-60 Micron confirming to IS 13871:1993	Steel Glass Door Almira	
9	Supply & Placing of Metal Almira of Size 916mm(W)x486mm(D)x1980mm(H). It should have the shelf thickness of 0.7 mm, Back thickness of 0.8mm, Door thickness of 0.8mm (high yield strength) and all other components shall have a thickness of 0.9mm. These components shall be made of CRCA sheet 'D' grade high yield strength as per IS:513. The Storwel Plain should have a Mazak handle and Three way locking mechanism with Shooting Bolts. It should have a height wise adjustable shelf mounting which shall have a Uniformly Distributed Load Capacity of max 40 Kg. It shall have 4 no.s full shelves. A4 size box file(85 W x 285 D x 345 H mm) can be stored vertically on three shelves and the clear space above fourth shelf is 240mm. It should also have a M10 Screw type Leveller with Hex plastic base. All metal components would be powder coated with epoxy powder coating of 50-60 micron DFT Confirming IS 13871:1993	Steel Almira	
10	Supply and Istallation of One 2- Seater Sofa (1550 X 785 X 675 mm) ,understructure is made up of Natural Hard wood battens and 12mm THK COMMERCIAL PLYWOOD. High density foam is used for seat and back , The seat is made up of PU foam with density 32+/-2 Kg/m3 having an additional top layer of PU foam with density 28+/-2 Kg/m3, upholstered with leatherette. The back is made up of 28+/-2 Kg/m3 with additional top layer of PU foam with density 23+/-2 Kg/m3, upholstered with leatherette. LEATHERITE -ABRASION RESISTANCE in excess of 80,000 cycles, Legs are made up of 600 to 650 GSM PVC composition Legs are made of SS 304	Sofa Set 2 Seater + 3 Seater	
11	Supply and Installation of two 2- Seater Sofa (1550 X 785 X 675 mm) ,understructure is made up of Natural Hard wood battens and 12mm THK COMMERCIAL PLYWOOD. High density foam is used for seat and back , The seat is made up of PU foam with density 32+/-2 Kg/m3 having an additional top layer of PU foam with density 28+/-2 Kg/m3, upholstered with leatherette. The back is made up of 28+/-2 Kg/m3 with additional top layer of PU foam with density 23+/-2 Kg/m3, upholstered with eatherette. LEATHERITE -ABRASION RESISTANCE in excess of 80,000 cycles, 600 to 650 GSM PVC composition Legs are made of SS 304	Sofa Set 2 Seater + 2 Seater	
12	Supply and installation of Steel bed of overall size 1775-1825(L)x870(W)x650/450mm(H) consisting of following specification:- HEADBOARD- Head Board consists of MS tube of 25 x 50 x 1.6 mm thick vertical legs connected with 2 number horizontal members of MS ERW tube 25x50x1.6mm thick and one number MS ERW tube of 25 x 25 x 1.6 mm at middle conforming to IS-Grade 4923. Construction is partially welded with MIG welding conforming to IS standard IS 816:1969 and is also tested as per the IS grade IS 822:1970. Legs shall be fitted to the ground with M8 screw leveler with the height adjustment up to 12mm to 15mm if required. Head Board and Tail board are connected to middle frame with 2 mm thick CRCA bracket conforming to IS 513: 2008.Connecting bracket is welded on vertical pipe. End to end dimensions for the Headboard is 870(W) x 650mm (H). Whole Assembly is finished with epoxy powder coated of a minium thickness of DFT 50-60 Micron confirming to IS 13871:1993. TAILBOARD-Tail Board consists of vertical legs of MS ERW tube of 25x50x1.6mm thick connected with one number horizontal MS pipe 25x50x1.6mm thick Conforming IS-Grade 4923. Construction is partially welded with MIG welding conforming to IS standard IS 816:1969 and welding is also tested as per the IS grade IS 822:1970. Legs shall be fitted to the ground with M8 screw leveler with the height adjustment up to 12mm to 15mm if required .To connect Tailboard with middle frame 2mm thick CRCA sheet bracket is used conforming IS 513: 2008 . Connecting bracket is welded on vertical pipe. End to end dimensions for the Tailboard is 870(W)x450mm(H). Whole Assembly is finished with epoxy powder coated of a minium thickness of DFT 50-60 Micron confirming to IS 13871:1993. Bed Staggering- Head board and Tail board are joined together by bed stage made up of 12 mm Merine grade ply conforming to IS 710 , supported over steel framework consisting of two outer MS ERW Pipe 25x50x1.2mm thick IS-Grade 4923 and four numbers of 25 x25 x 1.6 mm MS ERW tubes as a cross bracing welded to each other by MIG welding. FINAL ASSEMBLY: Headboard, Tailboard, and middle frame shall be assebled and connected by 4 Nos of connecting Brackets & M8x16 Allen Bolt. The bed stage shall be 10-12 mm below side frame to provide proper fixity to mattress. End to end dimensions for the bed is 1775-1825 (L) x 870(W)x 650/450mm(H). Finish- All metal components are given anti-rust surface treatment and are finised with epoxy polyster powder coated DFT 50-60 Micron confirming to IS 13871:1993.	Metal Bed	







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<p>Metal Table with Integrated Storage 1750(L) x 600(W) x 750(H) for two students</p> <p>Work Top Shall be made up of 25mm thick Prelam (OSL) particle board conforming to IS 12823: 1990 with post formed edge moulding on one side and 2 mm thick Machine pressed PVC edge banding glued with industrial adhesive and monolithically diffused with board on other three sides.</p> <p>Supporting Structure of table top consists of 4 vertical Legs of ERW tube 40 x40 x 1.6 mm and one storage unit at middle. The vertical legs are connected with 2 cross horizontal members of size ERW Tube of 40 x 40 x 1.6 mm provided at top a. The table shall have provisions of foot rest made up of 25 x25 x1.2 mm ERW pipe fitted in between two vertical legs and also support the storgae unit & acts as bracing member. All ERW pipes are pipe shall to conform to IS grade IS 4923 and shall be finished with epoxy polyester powder coated DFT 50-60 Micron Confirming IS 13871:1993.</p> <p>Drawer Unit: SPECIFICATIONS :-</p> <p>Table shall have 2 numbers of Metal Storage consisting of Shutter of size consisting of 350 (W) x 550 (D) x 280 (H) mm Pad Lock provision . All metal component including shutter and Shelf shall be made of 0.8mm thick CRCA confirm to IS grade IS 513 and shall be powder coated with epoxy powder coating of 50 micron DFT Confirming IS 13871:1993.</p>	<p>Metal Table with Integrated Storage 1750(L) x 600(W) x 750(H).</p>	
<p>14 SS Dinning Table consists of Dinning Top is made up of and 1 mm thickness Stainless steel sheet of SS 304 Grade with overall dimension of 2400(L) X 760(D) X 750(H). The table top is reinforced with a 20 mm HDHMR Board. Dinning top sheet shall be extended to the sides for a depth of 24 mm in all directions including , edge rounding, grining and finishing ,etc all complete . The Table top shall finish in such a manner to avoid any sharp edges.</p> <p>Stool Seats are made of 300 mm dia SS 202 Grade formed Plates of 1 mm thickness welded over 3 mm thick MS Plate.</p> <p>Supporting understructure of table consists of 4 number C legged frame made up of 40 x40 x1.6 mm ERW tube and are connected to 6 numbers horizontal members of MS ERW tube 40 x 40 x 1.6 mm.</p> <p>The supporting vertical member of each stool seat consists of MS ERW tube 40 x 40 x 1.6 mmn and is connected to C legged frame of table top. All Metal components of entire asebmly confirm to IS 4923. Both the horizontal and vertical pipes are welded together by MIG welding conforming to IS standard IS 816:1969 and is tested for welding conforming to IS 822:1970. All CRCA Componets would be shall be finised with epoxy polyester powder coated DFT 50-60 Micron confirming IS 13871:1993.</p> <p>Understructure height of table will be 725mm from the ground, and the stool height will be 500mm from the ground.</p>	<p>8 Seater SS Top Fixed Canteen Table 2400 x 750</p>	
<p>15 SS Dinning Table consists of Dinning Top is made up of and 1 mm thickness Stainless steel sheet of SS 304 Grade with overall dimension of 1800(L) X 760(D) X 750(H). The table top is reinforced with a 20 mm HDHMR Board. Dinning top sheet shall be extended to the sides for a depth of 24 mm in all directions including , edge rounding, grining and finishing ,etc all complete . The Table top shall finish in such a manner to avoid any sharp edges.</p> <p>Stool Seats are made of 300 mm dia SS 202 Grade formed Plates of 1 mm thickness welded over 3 mm thick MS Plate.</p> <p>Supporting understructure of table consists of 3 number C legged frame made up of 40 x40 x1.6 mm ERW tube and are connected to 4 numbers horizontal members of MS ERW tube 40 x 40 x 1.6 mm.</p> <p>The supporting vertical member of each stool seat consists of MS ERW tube 40 x 40 x 1.6 mmn and is connected to C legged frame of table top. All Metal components of entire asebmly confirm to IS 4923. Both the horizontal and vertical pipes are welded together by MIG welding conforming to IS standard IS 816:1969 and is tested for welding conforming to IS 822:1970. All CRCA Componets shall be finised with epoxy polyester powder coated DFT 50-60 Micron confirming IS 13871:1993.</p> <p>Understructure height of table will be 725mm from the ground, and the stool height will be 500mm from the ground. .</p>	<p>6 Seater SS Top Fixed Canteen Table 1800 x 750</p>	
<p>16 Supply and installation of Lab Stool Seat made up of 300 mm dia SS 202 Grade formed Plates of 1 mm thickness welded over 3 mm thick MS Plate. The Stool seat is supported by four legs 19x19x1.2mm SQUARE Pipe. Stool shall be provided with foot rest made of 19 x 19 x 1.2 mm thick MS Tube at a height of 100 mm from ground. Height of stool is st from the ground shall be 540. Legs are provided with PU/PVC leveller at the bottom.</p> <p>All MS CRCA Componets are confirming to IS 4923 and finished with epoxy powder coated finish (DFT Minimum 45 micron) Confirming IS 13871:1993.</p>	<p>Lab Stool</p>	
<p>17 Supplying & placing in position Executive Chair as per indicative photograph and specification:</p> <p>(i) SEAT/BACK ASSEMBLY: The seat and back should be made up of 1.2 ±0.1cm. thick hot-pressed plywood and upholstered with .fabric upholstery covers and moulded Polyurethane foam. The back foam should be designed with contoured lumbar support for extra comfort. The seat has extra thick foam on front edge to give comfort to popliteal area.</p> <p style="text-align: center;">BACK SIZE 47.5 cm. (W) x 69.5 cm (H)</p> <p>SEAT SIZE 47.0 cm. (W) x 48.0 cm. (D)</p> <p>(ii) HIGH RESILIENCE (HR) POLYURETHANE FOAM: The HR polyurethane foam should be moulded with density = 45±2 kg/m3 and hardness load 16 ± 2 kgf for 25% compression.</p> <p>(iii) ARMRESTS :The one-piece armrests should be injection moulded from black Co-polymer Polypropylene.</p> <p style="text-align: center;">(iv) CENTER TILT SYNCHRO mechanism: The mechanism should be designed with the following features:</p> <ul style="list-style-type: none"> • 360° revolving type. • Upright-position locking • Tilt tension adjustment • Seat/back tilting ratio of 1:3. <p>(v).PNEUMATIC HEIGHT ADJUSTMENT: The pneumatic height adjustment has an adjustment stroke of 12.0 ±0.3cm.</p> <p>(vi).TELESCOPIC BELLOW ASSEMBLYThe bellow should be 3 piece telescopic type and injection moulded in black Polypropylene.</p> <p>(vii).PEDESTAL ASSEMBLY:The pedestal should be injection moulded in black 33% glass-filled Nylon-66 and fitted with 5 nos. twin wheel castors. The pedestal should be 66.3 ±0.5cm. pitch-center dia. (76.3 ±1.0cm with castors).</p> <p>(viii).TWIN WHEEL CASTORS:The twin wheel castors should be injection moulded in Black Nylon.</p>	<p>High Back Chair</p>	
<p>18 Supply & Installation of Medium Back Chair as perindicative photograph and specification:</p> <p>(i) SEAT/BACK ASSEMBLY: The seat and back should be made up of 1.2 ±0.1cm. thick hot-pressed plywood and upholstered with .fabric upholstery covers and moulded Polyurethane foam. The back foam should be designed with contoured lumbar support for extra comfort. The seat has extra thick foam on front edge to give comfort to popliteal area</p> <p style="text-align: center;">BACK SIZE 47.5 cm. (W) x58.0 cm (H)</p> <p>SEAT SIZE 47.0 cm. (W) x 48.0 cm. (D)</p> <p>(ii) HIGH RESILIENCE (HR) POLYURETHANE FOAM: The HR polyurethane foam should be moulded with density = 45±2 kg/m3 and hardness load 16 ± 2 kgf for 25% compression.</p> <p>(iii)ARMREST- The one-piece armrests should be injection moulded from black Co-polymer Polypropylene.</p> <p>(iv) CENTER TILT SYNCHRO mechanism: The mechanism should be designed with the following features:</p> <ul style="list-style-type: none"> • 360° revolving type. • Upright-position locking • Tilt tension adjustment • Seat/back tilting ratio of 1:3. <p>(v).PNEUMATIC HEIGHT ADJUSTMENT: The pneumatic height adjustment has an adjustment stroke of 12.0 ±0.3cm.</p> <p>(vi).TELESCOPIC BELLOW ASSEMBLY : The bellow should be 3 piece telescopic type and injection moulded in black Polypropylene.</p> <p>(vii).PEDESTAL ASSEMBLY:The pedestal should be injection moulded in black 33% glass-filled Nylon-66 and fitted with 5 nos. twin wheel castors. The pedestal should be 66.3 ±0.5cm. pitch-center dia. (76.3 ±1.0cm with castors).</p> <p>(viii).TWIN WHEEL CASTORS:The twin wheel castors should be injection moulded in Black Nylon.</p>	<p>Medium Back Chair</p>	

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	Supply and installation of Medium Back Chair as per indicative photograph and specification: (i). SEAT/BACK ASSEMBLY: The seat and back should be made up of 1.2 ±0.1cm. thick hot-pressed plywood and upholstered with fabric upholstery covers and moulded Polyurethane foam. The back foam should be designed with contoured lumbar support for extra comfort. The seat has extra thick foam on front edge to give comfort to popliteal area. BACK SIZE 47.5 cm. (W) x58.0 cm (H) SEAT SIZE 47.0 cm. (W) x 48.0 cm. (D) (ii).HIGH RESILIENCE (HR) POLYURETHANE FOAM: The HR polyurethane foam should be moulded with density = 45±2 kg/m3 and hardness load 16 ± 2 Kgf for 25% compression. (iii) ARMRESTS :The one-piece armrests should be injection moulded from black Co-polymer Polypropylene. (iv)TUBULAR FRAME: The powder coated (DFT 40-60 microns) tubular frame should be cantilever type & made of 0 2.54 ±0.03cm. x 0.2 ±0.016cm.thk. M.S. ER.W. Tube.	Visitor Chair	
20	Supply and placing of chair with MOULDED PLY SHELL: The Nosh shell is made up of moulded ply in Veneer or Laminate finish. Shell size - 420 mm (W) X 410 mm (D) X 440 (H) X Thickness 12 mm. UNDERSTRUCTURE: The Understructure is made up of Diameter 19 x 1.6 mm thk and 2mm MS plate welded with it. Powder Coating done in Texture Metallic Silver Color having DFT – 50 to 80 micron.	Chair without arm	
21	Supply and installation of Wooden chair of Dimension - 480W x 420D x 820H UNDERSTRUCTURE:The Understructure is made from Hot pressed rubber wood. BACKREST: The backrest is made up of plywood and foam upholstered with polyester fabric. SEAT:The seat is made up of 12mm thick (7 layers) hot pressed plywood and moulded seat foam upholstered with fabric. SEAT FOAM:Foam made out of moulded Polyurethane foam with the following properties: • Density (IS-7888-1976) : 50-55 Kg/m3. • Hardness: 28+/-3 Kgf. • Compression set (IS-7888-1976): 10% Max. • Tensile strength (IS-7888-1976): 0.9-1.2 Kg/cm2. • Tear strength(Min) (IS-8067) : 0.6 Kg/cm(min) • Resilience (IS-7888-1976): 40% - 60% • Elongation (IS-7888-1976): 110 % GLIDE:The glide is made from Nylon. SEAT AND BACK FABRIC PROPERTIES: Content: 100% Polyester 170 GSM Abrasion Resistance:Over 30000 cycle.Bursting Strength: 19.1 kg/cm²Tear Strength (NF):	Chair without arm	
21	Supply and installation of Metal Lockers consisting of unit size of 381W x 381D x 1831H with 4 Lockers . Body-LH and RH Side and back panel is made up of 0.8mm thick CRCA sheet conforming to IS 513:2008 which is having standard dimension 1831 x380mm. Shelf hanging bracket is welded on both the side panel by spot welding. Shelf hanging bracket is made up of 0.8mm thick CRCA sheet conforming to IS 513:2008. front frame top and bottom part made up 0.8mm thick CRCA sheet conforming to IS 513:2008 and horizontal part is made up 1mm thick CRCA sheet conforming to IS 513:2008. On a front frame horizontally provision is given at a common distance to hold shutter bracket. Locker's top is made up of 0.8mm thick CRCA sheet conforming IS 513:2008 which is having standard dimension 375 x378mm. Shelf is also made up of 0.8 mm CRCA sheet conforming to IS 513:2008. Shutter- Is made up on 0.7mm thick CRCA sheet conforming to IS 513:2008. All the shutter are hung on shutter pin and shutter bracket, louvers are given shutter for air flow. PVC flush handle and name plate is used for handling and for name plate tagging. Standard PAD/CAM lock is used for locking each shutter. The bodies including shelves are given anti-rust surface treatment & are powder coated with epoxy polyester powder coating of DFT 50-60 Micron conforming to IS 13871:1993.	Personal Locker Unit	
22(a)	'Super White' writing grade resin coated steel writing surface conforming to International Standards. A 100% smooth and 100% scratch-free surface ensures maximum pleasure of writing. The surface can also be used for sticking magnets or magnet impregnated objects Satin-finish alloy aluminium (6063-T6) frame and precision engineered paper honeycomb core to make the board 100% warp-free and 100% flat. Can be mounted in landscape as well as portrait orientation on a wall with the help of built-in wall hanging clips Excellent erasability with no ghost-marks, high scratch-resistance with easy- wipe properties and maximum readability with minimum glare makes the Genius series boards an ideal companion for all training, teaching, display and learning activities Material: Resin Coated Steel Writing Surface, Alloy Aluminum Frame, Paper Honeycomb Core & Virgin ABS Corners. Size of the board: 6 x 4 Feet	Magnetic White Board- 6' x 4'	
22(b)	'Green' writing grade melamine writing surface (chalk sheet) conforming to IS:2046/1997. A 100% clean and 100% scratch-free surface ensures maximum pleasure of writing. The surface cannot be used for sticking magnets or magnet impregnated objects Satin-finish alloy aluminium (6063-T6) frame and precision engineered paper honeycomb core to make the board 100% warp-free and 100% flat. Can be mounted in landscape as well as portrait orientation on a wall with the help of built-in wall hanging clips Excellent erasability with no ghost-marks, high scratch-resistance with easy- wipe properties, maximum readability with minimum glare and minimum chalk dust formation with clean & continuous lines of chalk, makes the Genius series boards an ideal companion for all training, teaching, display and learning activities Board Size: 3x4 Feet (90x120 CM). Suitable for use at home, home offices, offices and schools. Works well with all standard chalk sticks	Melamine Surface Non-Magnetic Chalk Board-6' X 4'	



File No: NESTS/Civil/EMRS Order/140/2021-22(Pt.)

Date: 14.03.2023

To,

- a) **Principal Secretary** of concerned States entrusted with EMRSs construction.
- b) **CMD/MD/CEO,**
HSCL/WAPCOS/EPIL/NPCC/B & R/MANIDCO/TCIL/MTDC
- c) **Chief Engineer/s,** CPWD

Sub: EMRS Guidelines for submission of Detailed Project Report (DPR) and Construction of EMRSs including Upgradation of KSP Reg.

Dear Sir,

Construction Agencies have been allotted construction of Eklavya Model Residential Schools (EMRSs) in the designated blocks across the country. Phase-I construction of EMRSs is in progress at many locations. DPR Guidelines for Phase-I construction was earlier issued vide NESTS Order dated 18.10.2021 which was updated vide NESTS letter dated 30.03.2022 to cover both Phase-II construction and Single-Phase Construction as the case may be. Further, Electrical & Other Services drawings were issued vide NESTS Order dated 07.05.2022. Now certain updation and improvements in the issued drawings have been made based on valuable inputs from Construction Agencies considering functional requirements and aesthetic improvements.

It has been observed that Construction Agencies are submitting architectural drawings which are found to be deviating from the Reference Drawings already issued. Also, there happens abnormal delay in preparation of DPRs due to delay in finalization of architectural drawings/Estimates/DPR. In most of the cases, Construction Agencies' Engineers simply forward the DPR/Estimate/Drawings prepared by their consultants without any proper scrutiny at their end. DPR submitted by Construction Agencies are most often incomplete lacking essential items that require several rounds of discussion and takes more time for its finalization. DPR shall be submitted as per DPR Checklist **Annexure I**.

Further, based on several valuable inputs from Construction Agencies and NESTS Engineers from field units, updation of reference drawings & specifications is being felt necessary for overall improvement of project from aesthetic and functionality point of view.

Considering the above, following initiatives are approved to facilitate & streamline preparation and submission of DPRs: -

1. **Architectural Drawings:** Requirements of EMRSs across the country are moreover of similar nature except the sites needing site-specific requirements. Further, construction of buildings in the North Eastern region and hilly areas requires adopting special design & construction as per available hilly terrain to reduce the cost of construction. To cater general needs, conceptual Architectural Drawings have been standardized by NESTS which are enclosed as **Annexure-A1, A2 & A3** mentioned below. Construction Agencies shall enclose the same with DPR to save time. However, Construction Agencies have to bring to notice of NESTS any discrepancy, violation of NBC and other norms/ local bye laws, if any, well before finalization of the planning activities.

S.N.	Type of EMRS Building	Storey	Annexure	Drawings
1	School (C-Type) (Standard)	G+1	Annexure A1	Architectural Drawings, Door/Window Schedules, Internal Electrical Layout Drawings, Wall & Floor Tiles details.
	Hostel (Standard)	G+1		
	Kitchen Dining (Standard)	G		
	Warden Residence	G		
	T-II Qtrs (Standard)	G+1/G+2		
	T-III Qtrs (Standard) i/c one no. integrated Guest house at GF	G+1		
	Principal Residence	G		
	ESS, Sump, Pump Room & Septic Tank, Entrance Gate etc	G		
2	School (NE) (Standard)	G+2	Annexure A2	Architectural Drawings, Door/Window Schedules, Electrical Layout Drawings (For remaining drawing Refer Annexure A1)
	Hostel (G+2) (With bunk bed & integrated Kitchen-Dining at GF)	G+2		
3	School (Hilly) (Standard)	G+2	Annexure A3	Architectural Drawings, Door/Window Schedules, Electrical Layout Drawings (For remaining drawings Refer Annexure A1)
	Hostel (G+2) (Without bunk bed)	G+2		

2. **Detailed Estimate:** Reference Estimates for standard buildings and North East have been prepared by NESTS. The Reference Estimates can be modified as per the site-specific structural drawings, soil investigation report and as per the site-specific requirements e.g., cutting, filling, protection works, land development proposal, external sewerage & drainage, water supply plans, electrical cable layout & distribution lines, etc. Reference estimate is indicative only. The design of buildings and services, quantities of items, rates provided in the DPR, shall be sole responsibilities of Construction Agencies. Construction Agencies shall ensure that estimate submitted along with DPR shall conform NBC Norms and other norms/ local by laws, if any.
3. **Vetted Structural Drawings:** Submission of vetted structural drawings of all building units is mandatory with DPRs. In case of delay in vetting, Construction Agencies shall give undertaking with due time frame for submission of the vetted structural drawings alongwith DPR. However, in such cases structural drawings shall be submitted alongwith DPR and thereafter, go ahead for vetting is required from NESTS. NESTS order dated 27.01.2022 for vetting of structural drawings shall strictly be followed.
4. NESTS engineers deputed in the Zone shall be consulted in finalization of site-specific estimates of cutting filling, protection works, land development proposals, external sewerage, drainage, water supply, cable route, etc.
5. **Specifications:** Specifications as **Annexure 'B'** is attached with changes as under:
 - i. PTMT Fittings are being replaced with CP brass fittings considering its durability except PTMT tower rail, towel ring, soap dispenser.
 - ii. Windows- Factory Made ISI marked MS glazed 'Z' section windows has been replaced partially with Factory Made ISI marked MS glazed Windows consisting of MS Tubular Frame/ Hollow Z section Profile and ISI marked Z section Shutter/ Tubular Profile Z Section partly fixed and/or partly side hung/top hung including MS grill of 12 mm square bar rods fixed @ spacing of 10 to 12 cm in the



Frame. Windows sizes and design shall be as per NESTS approved drawings and Schedules. Item shall be as per respective DSR item. Windows sizes and design shall be as per NESTS approved drawings and schedules.

- iii. External Façade of Stair Case - GRC Jali may be replaced with Glazed Panels in MS Tubular frame.
- iv. NESTS Preferred Make List dated 25.05.2022 shall be followed. For certain items such as CP Brass Fittings, Factory made glazed windows, etc not covered under NESTS preferred make list dated 25.05.2022, CPWD preferred make list of respective regions may be adopted and same shall be included in the DPR.
- v. Specification: **Annexure 'B1 to B 3'** can also be referred.

6. **Additional Preferred Make List** : In addition to Preferred Make List dated 25.05.2022, Preferred Make List of Additional Items is enclosed for inclusion in DPR as under:

S.No.	Material/Article	Manufacturers/ Agencies/ Brand Make
1.	Factory Made steel Glazed / Gauged windows & ventilators	SKS Steel Industries /Madhu Industries / MULTIWIN /M/s Classic Engineers and Fabricators /Ajanta /CPWD LATEST Approved Make of respective region
2.	Solar Lighting System	WIPRO/Panasonic /Phillips/ Crompton /CPWD LATEST Approved Make of respective region
3.	CP Brass Fittings/ Fixtures	JAQUAR, MARC, Hindware, Parryware, CERA /Parko CPWD LATEST Approved Make of respective region.

7. ***Furniture:** Now, DPR shall be inclusive of furniture provisions. Hence, Construction Agencies are to include furniture provision in the Detailed Estimate. Furniture layout and detailed items' specifications including 3-D indicative photographs is enclosed at **Annexure 'C'** for preparation of estimate for Furniture & Fittings. Construction Agencies shall make these items part of DPR and accordingly, additional condition needs to be stipulated for supply and installation of furniture. Construction Agencies need to enclose preferred list from available reputed brand/manufacturers in this field in the NIT along with additional condition for timely supply and quality work. Further, Construction Agencies shall arrange the sample of each item for inspection by NESTS before releasing the bulk order, as & when requested for. The Budget Provision of Furniture is kept for Rs 1.25 Crore. While specifying the reputed brands/manufacturers, Construction Agencies shall ensure following criteria:

- a. The reputed brands shall have certain minimum turnover for past three years.
- b. They shall have sufficient work experience of similar works in Government organization.
- c. They shall have registered service center in the State.
- d. The furniture shall carry the service warranty of minimum three years from the date of installation.

8. ***Kitchen Tools & Plants:** Now, DPR shall also be inclusive of provisions of Kitchen Machinery and Tool & Plant. An indicative layout of Kitchen equipment and Tools & Plants including list of items is enclosed at **Annexure 'D'** along with details of items. Construction Agencies shall finalize the specification and rates and include these provisions in DPR. The provision for Kitchen Machinery and T & P has been kept for Rs 25 Lakhs.

*** (It may be noted that procurement with respect to point 7 & 8 shall be done on actual basis based upon due assessment of existing/available furniture and kitchen tools & plants in the school.)**

9. **Time Frame for Pre-Construction Activities:** The timeframe for pre-construction activities as indicated earlier shall strictly have to be adhered to as provided in the MoU.

10. **Quality Plan, Monitoring and Quality Control:** -



- i. Quality Plan- Construction Agencies are generally not submitting any Quality Plan for construction along with DPRs. Hence, Model Quality Plan for quality control and TPQA related activities is enclosed which shall form part of the DPR (**Annexure 'E'**). TPQA shall be conducted by NIT/IIT as per TPQA Guidelines dated 20.04.2022. The Construction Agencies shall in consultation with NESTS finalize Third Party Quality Assurance (TPQA) Agency before commencement of work. No work shall be permitted without TPQA agency.
- ii. NESTS shall be informed regarding final position of buildings at the site including site development plan, contour level, etc. before commencement of the building works.
- iii. The CA shall ensure the proper demarcation of the land before start of the execution related activities. In case, any deviation in the approved area/boundary line, the revised MLP with reference to actual available land area/boundary shall be shared to NESTS for revised approval.
- iv. Working Drawings- A complete set of architectural/ working drawings incorporating all features of MLP and Plinth level of buildings, finished road level, septic tank level etc shall be shared to NESTS before execution.
- v. Other Layout- The layout diagram of Storm Water Drains, Sewerage, Water Distribution Diagrams, UG cables, Street lights, etc shall be shared with NESTS after the layout marking at site is finalized.
- vi. Vetted copy of Structural Drawings - The vetted copy of structural drawings shall be available at the time of physical commencement of work. No building work shall be permitted without vetted structural drawings.
- vii. The Quality plan and Design Mix Plant shall be available at the site before the time of commencement.
- viii. Construction Agencies shall ensure thorough checking/cross checking of reinforcements before casting of RCC, casting of all RCC work in presence of Site engineer, mandatory testing of materials at prescribed frequencies as per Quality Plan, etc to ensure quality construction.
- ix. The important activities like layout and positioning of Columns, Beams, Brick Work shall be marked properly as per architectural drawings to avoid any deviation in architectural drawings.
- x. The Critical Activities like DPC, water proofing of toilets and terrace must be done with specialized agency to avoid future leakage, water seepage etc.
- xi. Joint visit of Architect, Structural Engineer, TPQAA and Engineering Team of Construction Agency is essentially required before commencement of building work to ensure layout of building units, other services in proper order and quality work as per the approved drawings. This would help to finalize the site development works like road, drainage, building levels, etc. The report of joint site visit shall be shared with NESTS.
- xii. Construction Agencies shall intimate the major construction activities e.g., layout finalization, foundation casting, other important RCC casting, bar bending, etc to the NESTS Consultant in advance so that the NESTS Technical Consultant visit the site. Any observation on quality issue raised during visit needs to be addressed immediately and a final report duly accepted by NESTS Consultant shall be submitted in Running Account Bill.
- xiii. The regular monitoring and frequent site visit by engineering team including Zonal Head of the Construction Agency is absolutely necessary to ensure quality, reinforcements are in place and the construction is being done as per approved architectural and vetted structural drawings. Construction Agencies must ensure that the site engineer is stationed at the site for proper execution of the work.

11. **Execution of Critical Items**- Construction Agencies shall have to share in advance detail work plan for following critical activities:

- i. Waterproofing with authorized waterproofing vendor only
- ii. Flooring as per layout approved by NESTS
- iii. Plumbing: Trial run of plumbing works in part of building before execution in general
- iv. Windows: Only factory-made window of standard section shall be permitted. CPWD approved make list shall only be used. No local/site fabrication. NESTS approved drawing to be used.
- v. Doors: Only Factory-made doors and pre- laminated doors of approved make
- vi. Septic tank and Sewage: Relevant IS Code & NESTS Guidelines/CPWD specification to be followed
- vii. Roads: CC road section as per site condition in coordination with NESTS
- viii. Finishing, Façade and other allied works: Shall be as per NESTS approved plan.
- ix. Expansion Joint – Construction and treatment of expansion joint shall be done as per IS Code and respective DSR items.



12. **Electromechanical Services** - A detailed guidelines for supply, installation & testing of Electromechanical services like Transformer, LT/HT Panels, Wiring, LAN services, DG Set, Pump, Internal & External Lighting, Fire Fighting Equipment, etc is attached at **Annexure 'F'**.

13. **Deviation Regarding:**

- i. The Construction Agencies shall have to share and discuss final layout with demarcated position of buildings vis-à-vis approved MLP with NESTS before commencement. This would help in avoiding deviation in quantities and expenditure involving cutting, filling and earth protection works.
- ii. The finalization of Structural Drawings at DPR stage to arrive at correct estimation of RCC quantity will avoid future deviation. Before commencement of RCC work, Construction Agencies shall cross verify the quantities of reinforcement & RCC of vetted structural drawings with BOQ and any deviation shall be brought to the notice of NESTS immediately.
- iii. The Construction Agencies shall take adequate measures to avoid deviation at every stage of construction. In this regard, proper technical scrutiny of site conditions, layout, foundation, structural drawings, etc, involving competent technical manpower, Zonal Manager are essentially required. No expenditure beyond A/A & E/S provisions shall be permitted considering the budget constraint.
- iv. Submission of Deviation- Deviation Statement shall be submitted along with details of measurements, vetted structural drawings, approved architectural drawings & MLP as per MoU.

14. **Documentation and Photograph of ongoing construction:** - Construction Agencies shall have to continuously share the GPS enabled photographs of ongoing construction to the EMRS Civil & Construction Agency Coordination WhatsApp group. The photographs need be shared at every stage of construction for important items and milestones like foundation reinforcement, RCC casting of foundations, columns, beams & Slab, masonry work, etc and along with each running bill.

15. **Manpower Deployment:** -

- i. The Construction Agencies shall have to inform the details of the Nodal Engineer from the dedicated cell at the respective Construction Agencies' HQ with name, experience, designation, etc for coordinating with NESTS along with name, qualification (CA number of the Architect), experience of appointed architect and structural engineer for the EMRS work along with DPR.
- ii. Construction Agencies shall share the details of Site Engineer, Project Engineer for each location with name designation, experience before commencement of the work as per Clause 2.3 of MoU.

Provision of Clause 2.3 of MoU is reiterated "The Construction Agency shall nominate full time regular technically qualified and experienced engineers at each site for supervision, monitoring and execution of the project in time bound manner". The deployment of competent and experienced technical manpower is integral part of project management to ensure timely and quality construction of high valued project. The Clause stipulates provision of one Project Manager (regular) for every 4 site engineers" The clause 2.7 of MoU specifies also certain minimum standard of qualification and experience of technical manpower to be deployed in construction site."

16. **EMRS in North East/Hilly Area:** The construction of EMRS in the North Eastern region and hilly areas requires adopting construction & special design as per the available hilly terrain. The EMRS building may be planned along contour with special design to reduce the cost of construction. Every structure in hilly area is required to be designed as per availability of terrain of the land. Regarding roofing in high rainfall areas, the roof truss with pre-coated profile sheet roofing shall be considered in place of flat RCC slab roof for school buildings. The special planning and design in respect of North East Region and Hilly region are detailed below: -

- i. The school building shall be G +2 with pre-coated roof/flat roof depending upon rainfall intensity.
- ii. The Hostel buildings shall be G +2 including kitchen & Dinning. No separate Kitchen and Dining Building.
- iii. Conceptual Architectural drawings for North East is enclosed at **Annexure A2**.
- iv. Conceptual Architectural drawings for Hilly is enclosed at **Annexure A3**.

The above guidelines, specifications, updated architectural drawings and procedures shall be followed henceforth. For the project needing special modifications, site specific approval shall be obtained. However, any deviation from standard norms of educational buildings, anomalies, etc in drawings shall be brought to the notice of NESTS. Further, Phase-II approval shall be conveyed only after compliance of all pending issues related to drawings, quality, vetting, etc of Phase-I Construction.

In view of above, Construction Agencies are requested to take up pre-construction activities like submission of Final MLP and Preliminary Estimates for issue of A/A & E/S for Phase-II and Single-phase construction, as the case may be, as per the guidelines mentioned above, so that, further construction activities like approval of DPR/Supplementary DPR, etc may be processed. The Likely Project Cost on completion of Phase-I shall be shared along with Preliminary Estimate of Phase-II in prescribed table indicated in the earlier guidelines dated 30.03.2022. The Construction Agencies shall exercise due care to submit the total Project Cost of Phase-I considering deviation, if any. These guidelines are in conformity of the Clause 3.22 of revised MoU with Construction Agencies and shall form part of agreement. These specifications and guidelines shall prevail over previous guidelines and shall also be applicable for upgradation work of KSP to EMRS in the state of Madhya Pradesh. The whole work of EMRS and Up-gradation shall be carried out in most systematic manner as per MoU and EMRS guidelines enclosed herewith.

Further, for any item to be procured by Construction Agencies relevant provisions of latest GFR/Ministry of Finance guidelines/CPWD Works Manual, etc is to be strictly adhered to. As per Agreement with NESTS in any case, the calling of tender, its publicity, assessment of reasonability of tender, its rates and awarding of work to the L-1 bidder is the sole responsibility of Competent Authority of the Construction agency.

This order issues with the approval of Competent Authority.

Encl.: As above.

Yours sincerely,



(Gourav Sharma),
Assistant Commissioner, NESTS

Copy to:

1. PS to the Principal Secretary/Secretary/Nodal Officer of EMRS Works of the Tribal Welfare/Development Department of the State Government concerned please.
2. Nodal Officer of the EMRS Works of the CONSTRUCTION AGENCIES concerned;
3. PS to Commissioner, NESTS;
4. PS to Additional Commissioner;
5. Guard File.

राष्ट्रीय आदिवासी छात्र शिक्षा समिति
(जनजातीय कार्य मंत्रालय के अंतर्गत
एक स्वायत्त संस्थान, भारत सरकार)
भू-तल, गेट नंबर-3ए, जीवन तारा बिल्डिंग,
संसद मार्ग, नई दिल्ली-110001
दूर. 011-23340280



National Education Society for Tribal Students
(An Autonomous Organization under
Ministry of Tribal Affairs, Govt. of India)
Ground Floor, Gate No.3 A, Jeevan Tara Building,
Parliament Street, New Delhi-110001
Telephone No. 011-23340280
वेबसाइट/Website: www.tribal.nic.in
Email: nests-tribal@tribal.gov.in

File No: NESTS/Civil/EMRS Order/140/2021-22(Pt.)

Date: 26.05.2023

To,

1. **Principal Secretary/Secretary/Commissioner/Nodal Officer** of the Tribal Welfare/Development Department of State Government please;
2. **CMD/MD/CEO,**
B & R/EPIL/HSCL/NPCC/MTDC/MANIDCO/TCIL/WAPCOS
3. **Chief Engineers,** CPWD of respective regions entrusted with EMRS works;

Sub: Guidelines in r/o Furniture (F) and Kitchen Equipments/Machinery Tools & Plants (KE/MTP) of EMRSs-Reg.

Dear Sir,

Kind attention is invited towards the subject cited above.

In this regard, following has been approved:

- a. The ceiling in r/o Furniture (F) is Rs. 1.25 crore and Rs 25 Lakhs in r/o Kitchen Equipments/Machinery Tools & Plants (KE/MTP) **separately** for individual EMRS (under New Scheme), **which is to be strictly adhered within overall ceiling of Rs. 37.80 Crore/48 Crore for each EMRS, as the case may be, by State Societies/respective Construction Agencies.**
- b. In r/o different case-wise scenario in table below, following has been approved :

Type of Case	Scenario	Approved
Case-I	Schools under New Scheme, whose construction stands completed as on date and are awaiting inauguration/handling over/take over.	State Societies shall procure both Furniture (F) and Kitchen Equipments/Machinery Tools & Plants (KE/MTP) from CCA funds, on actual requirement basis subject to ceiling as given in para-"a" above.
Case-II	Schools under New Scheme, whose works are awarded/construction is undergoing at present in Single-Phase	Respective Construction Agencies shall procure both Furniture (F) and Kitchen Equipments/Machinery Tools & Plants (KE/MTP) from CCA funds, on actual requirement basis subject to ceiling as given in para-"a" above.
Case-III	Schools under New Scheme whose works are completed for Phase-I and whose Phase-II PEs and DPRs are yet to be approved	Respective Construction Agencies shall submit the PEs/DPRs, comprising of both Furniture (F) and Kitchen Equipments/Machinery Tools & Plants (KE/MTP) on actual requirement basis subject to ceiling as given in para-"a" above.
Case-IV	Schools under New Scheme for which Single-Phase PEs/DPRs are yet to be approved.	

- c. Suggestive specifications in r/o both Furniture (F) (**Annexure-A**) and Kitchen Equipments/Machinery Tools & Plants (KE/MTP) (**Annexure-B**) are enclosed.
- d. Procuring Entities shall be strictly procuring the items as per extant Govt procedure in this regard.

The guidelines approved above in r/o Furniture (F) and Kitchen Equipments/Machinery Tools & Plants (KE/MTP) is in suppression of all earlier letters issued in so far related to them, such as para-7 & 8 of letter of even no dt 14.03.2023 (encl.), 25.04.2023 (encl.), etc.

This issues with the approval of Competent Authority.

Encl.: As above.

Yours faithfully,



(Gourav Sharma),
Asstt. Commissioner, NESTS

Copy to:

1. PS to Commissioner, NESTS;
2. PS to Addl. Commissioner, NESTS;
3. Guard File.

राष्ट्रीय आदिवासी छात्र शिक्षा समिति
(जनजातीय कार्य मंत्रालय के अंतर्गत
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File No: NESTS/Civil/EMRS Order/140/2021-22(Pt.)

Date: 14.03.2023

To,

- a) **Principal Secretary** of concerned States entrusted with EMRSs construction.
- b) **CMD/MD/CEO,**
HSCL/WAPCOS/EPIL/NPCC/B & R/MANIDCO/TCIL/MTDC
- c) **Chief Engineer/s,** CPWD

Sub: EMRS Guidelines for submission of Detailed Project Report (DPR) and Construction of EMRSs including Upgradation of KSP Reg.

Dear Sir,

Construction Agencies have been allotted construction of Eklavya Model Residential Schools (EMRSs) in the designated blocks across the country. Phase-I construction of EMRSs is in progress at many locations. DPR Guidelines for Phase-I construction was earlier issued vide NESTS Order dated 18.10.2021 which was updated vide NESTS letter dated 30.03.2022 to cover both Phase-II construction and Single-Phase Construction as the case may be. Further, Electrical & Other Services drawings were issued vide NESTS Order dated 07.05.2022. Now certain updation and improvements in the issued drawings have been made based on valuable inputs from Construction Agencies considering functional requirements and aesthetic improvements.

It has been observed that Construction Agencies are submitting architectural drawings which are found to be deviating from the Reference Drawings already issued. Also, there happens abnormal delay in preparation of DPRs due to delay in finalization of architectural drawings/Estimates/DPR. In most of the cases, Construction Agencies' Engineers simply forward the DPR/Estimate/Drawings prepared by their consultants without any proper scrutiny at their end. DPR submitted by Construction Agencies are most often incomplete lacking essential items that require several rounds of discussion and takes more time for its finalization. DPR shall be submitted as per DPR Checklist **Annexure I**.

Further, based on several valuable inputs from Construction Agencies and NESTS Engineers from field units, updation of reference drawings & specifications is being felt necessary for overall improvement of project from aesthetic and functionality point of view.

Considering the above, following initiatives are approved to facilitate & streamline preparation and submission of DPRs: -

1. **Architectural Drawings:** Requirements of EMRSs across the country are moreover of similar nature except the sites needing site-specific requirements. Further, construction of buildings in the North Eastern region and hilly areas requires adopting special design & construction as per available hilly terrain to reduce the cost of construction. To cater general needs, conceptual Architectural Drawings have been standardized by NESTS which are enclosed as **Annexure-A1, A2 & A3** mentioned below. Construction Agencies shall enclose the same with DPR to save time. However, Construction Agencies have to bring to notice of NESTS any discrepancy, violation of NBC and other norms/ local bye laws, if any, well before finalization of the planning activities.

S.N.	Type of EMRS Building	Storey	Annexure	Drawings
1	School (C-Type) (Standard)	G+1	Annexure A1	Architectural Drawings, Door/Window Schedules, Internal Electrical Layout Drawings, Wall & Floor Tiles details.
	Hostel (Standard)	G+1		
	Kitchen Dining (Standard)	G		
	Warden Residence	G		
	T-II Qtrs (Standard)	G+1/G+2		
	T-III Qtrs (Standard) i/c one no. integrated Guest house at GF	G+1		
	Principal Residence	G		
	ESS, Sump, Pump Room & Septic Tank, Entrance Gate etc	G		
2	School (NE) (Standard)	G+2	Annexure A2	Architectural Drawings, Door/Window Schedules, Electrical Layout Drawings (For remaining drawing Refer Annexure A1)
	Hostel (G+2) (With bunk bed & integrated Kitchen-Dining at GF)	G+2		
3	School (Hilly) (Standard)	G+2	Annexure A3	Architectural Drawings, Door/Window Schedules, Electrical Layout Drawings (For remaining drawings Refer Annexure A1)
	Hostel (G+2) (Without bunk bed)	G+2		

2. **Detailed Estimate:** Reference Estimates for standard buildings and North East have been prepared by NESTS. The Reference Estimates can be modified as per the site-specific structural drawings, soil investigation report and as per the site-specific requirements e.g., cutting, filling, protection works, land development proposal, external sewerage & drainage, water supply plans, electrical cable layout & distribution lines, etc. Reference estimate is indicative only. The design of buildings and services, quantities of items, rates provided in the DPR, shall be sole responsibilities of Construction Agencies. Construction Agencies shall ensure that estimate submitted along with DPR shall conform NBC Norms and other norms/ local bye laws, if any.
3. **Vetted Structural Drawings:** Submission of vetted structural drawings of all building units is mandatory with DPRs. In case of delay in vetting, Construction Agencies shall give undertaking with due time frame for submission of the vetted structural drawings alongwith DPR. However, in such cases structural drawings shall be submitted alongwith DPR and thereafter, go ahead for vetting is required from NESTS. NESTS order dated 27.01.2022 for vetting of structural drawings shall strictly be followed.
4. NESTS engineers deputed in the Zone shall be consulted in finalization of site-specific estimates of cutting filling, protection works, land development proposals, external sewerage, drainage, water supply, cable route, etc.
5. **Specifications:** Specifications as **Annexure 'B'** is attached with changes as under:
 - i. PTMT Fittings are being replaced with CP brass fittings considering its durability except PTMT tower rail, towel ring, soap dispenser.
 - ii. Windows- Factory Made ISI marked MS glazed 'Z' section windows has been replaced partially with Factory Made ISI marked MS glazed Windows consisting of MS Tubular Frame/ Hollow Z section Profile and ISI marked Z section Shutter/ Tubular Profile Z Section partly fixed and/or partly side hung/top hung including MS grill of 12 mm square bar rods fixed @ spacing of 10 to 12 cm in the

Frame. Windows sizes and design shall be as per NESTS approved drawings and Schedules. Item shall be as per respective DSR item. Windows sizes and design shall be as per NESTS approved drawings and schedules.

- iii. External Façade of Stair Case - GRC Jali may be replaced with Glazed Panels in MS Tubular frame.
 - iv. NESTS Preferred Make List dated 25.05.2022 shall be followed. For certain items such as CP Brass Fittings, Factory made glazed windows, etc not covered under NESTS preferred make list dated 25.05.2022, CPWD preferred make list of respective regions may be adopted and same shall be included in the DPR.
 - v. Specification: **Annexure 'B1 to B 3'** can also be referred.
6. **Additional Preferred Make List** : In addition to Preferred Make List dated 25.05.2022, Preferred Make List of Additional Items is enclosed for inclusion in DPR as under:

S.No.	Material/Article	Manufacturers/ Agencies/ Brand Make
1.	Factory Made steel Glazed / Gauged windows & ventilators	SKS Steel Industries /Madhu Industries / MULTIWIN /M/s Classic Engineers and Fabricators /Ajanta /CPWD LATEST Approved Make of respective region
2.	Solar Lighting System	WIPRO/Panasonic /Phillips/ Crompton /CPWD LATEST Approved Make of respective region
3.	CP Brass Fittings/ Fixtures	JAQUAR, MARC, Hindware, Parryware, CERA /Parko CPWD LATEST Approved Make of respective region.

7. ***Furniture:** Now, DPR shall be inclusive of furniture provisions. Hence, Construction Agencies are to include furniture provision in the Detailed Estimate. Furniture layout and detailed items' specifications including 3-D indicative photographs is enclosed at **Annexure 'C'** for preparation of estimate for Furniture & Fittings. Construction Agencies shall make these items part of DPR and accordingly, additional condition needs to be stipulated for supply and installation of furniture. Construction Agencies need to enclose preferred list from available reputed brand/manufacturers in this field in the NIT along with additional condition for timely supply and quality work. Further, Construction Agencies shall arrange the sample of each item for inspection by NESTS before releasing the bulk order, as & when requested for. The Budget Provision of Furniture is kept for Rs 1.25 Crore. While specifying the reputed brands/manufacturers, Construction Agencies shall ensure following criteria:
- a. The reputed brands shall have certain minimum turnover for past three years.
 - b. They shall have sufficient work experience of similar works in Government organization.
 - c. They shall have registered service center in the State.
 - d. The furniture shall carry the service warranty of minimum three years from the date of installation.
8. ***Kitchen Tools & Plants:** Now, DPR shall also be inclusive of provisions of Kitchen Machinery and Tool & Plant. An indicative layout of Kitchen equipment and Tools & Plants including list of items is enclosed at **Annexure 'D'** along with details of items. Construction Agencies shall finalize the specification and rates and include these provisions in DPR. The provision for Kitchen Machinery and T & P has been kept for Rs 25 Lakhs.
- * (It may be noted that procurement with respect to point 7 & 8 shall be done on actual basis based upon due assessment of existing/available furniture and kitchen tools & plants in the school.)**
9. **Time Frame for Pre-Construction Activities:** The timeframe for pre-construction activities as indicated earlier shall strictly have to be adhered to as provided in the MoU.
10. **Quality Plan, Monitoring and Quality Control:** -

- i. Quality Plan- Construction Agencies are generally not submitting any Quality Plan for construction along with DPRs. Hence, Model Quality Plan for quality control and TPQA related activities is enclosed which shall form part of the DPR (**Annexure 'E'**). TPQA shall be conducted by NIT/IIT as per TPQA Guidelines dated 20.04.2022. The Construction Agencies shall in consultation with NESTS finalize Third Party Quality Assurance (TPQA) Agency before commencement of work. No work shall be permitted without TPQA agency.
 - ii. NESTS shall be informed regarding final position of buildings at the site including site development plan, contour level, etc. before commencement of the building works.
 - iii. The CA shall ensure the proper demarcation of the land before start of the execution related activities. In case, any deviation in the approved area/boundary line, the revised MLP with reference to actual available land area/boundary shall be shared to NESTS for revised approval.
 - iv. Working Drawings- A complete set of architectural/ working drawings incorporating all features of MLP and Plinth level of buildings, finished road level, septic tank level etc shall be shared to NESTS before execution.
 - v. Other Layout- The layout diagram of Storm Water Drains, Sewerage, Water Distribution Diagrams, UG cables, Street lights, etc shall be shared with NESTS after the layout marking at site is finalized.
 - vi. Vetted copy of Structural Drawings - The vetted copy of structural drawings shall be available at the time of physical commencement of work. No building work shall be permitted without vetted structural drawings.
 - vii. The Quality plan and Design Mix Plant shall be available at the site before the time of commencement.
 - viii. Construction Agencies shall ensure thorough checking/cross checking of reinforcements before casting of RCC, casting of all RCC work in presence of Site engineer, mandatory testing of materials at prescribed frequencies as per Quality Plan, etc to ensure quality construction.
 - ix. The important activities like layout and positioning of Columns, Beams, Brick Work shall be marked properly as per architectural drawings to avoid any deviation in architectural drawings.
 - x. The Critical Activities like DPC, water proofing of toilets and terrace must be done with specialized agency to avoid future leakage, water seepage etc.
 - xi. Joint visit of Architect, Structural Engineer, TPQAA and Engineering Team of Construction Agency is essentially required before commencement of building work to ensure layout of building units, other services in proper order and quality work as per the approved drawings. This would help to finalize the site development works like road, drainage, building levels, etc. The report of joint site visit shall be shared with NESTS.
 - xii. Construction Agencies shall intimate the major construction activities e.g., layout finalization, foundation casting, other important RCC casting, bar bending, etc to the NESTS Consultant in advance so that the NESTS Technical Consultant visit the site. Any observation on quality issue raised during visit needs to be addressed immediately and a final report duly accepted by NESTS Consultant shall be submitted in Running Account Bill.
 - xiii. The regular monitoring and frequent site visit by engineering team including Zonal Head of the Construction Agency is absolutely necessary to ensure quality, reinforcements are in place and the construction is being done as per approved architectural and vetted structural drawings. Construction Agencies must ensure that the site engineer is stationed at the site for proper execution of the work.
11. **Execution of Critical Items-** Construction Agencies shall have to share in advance detail work plan for following critical activities:
- i. Waterproofing with authorized waterproofing vendor only
 - ii. Flooring as per layout approved by NESTS
 - iii. Plumbing: Trial run of plumbing works in part of building before execution in general
 - iv. Windows: Only factory-made window of standard section shall be permitted. CPWD approved make list shall only be used. No local/site fabrication. NESTS approved drawing to be used.
 - v. Doors: Only Factory-made doors and pre- laminated doors of approved make
 - vi. Septic tank and Sewage: Relevant IS Code & NESTS Guidelines/CPWD specification to be followed
 - vii. Roads: CC road section as per site condition in coordination with NESTS
 - viii. Finishing, Façade and other allied works: Shall be as per NESTS approved plan.
 - ix. Expansion Joint – Construction and treatment of expansion joint shall be done as per IS Code and respective DSR items.



12. **Electromechanical Services** - A detailed guidelines for supply, installation & testing of Electromechanical services like Transformer, LT/HT Panels, Wiring, LAN services, DG Set, Pump, Internal & External Lighting, Fire Fighting Equipment, etc is attached at **Annexure 'F'**.

13. **Deviation Regarding:**

- i. The Construction Agencies shall have to share and discuss final layout with demarcated position of buildings vis-à-vis approved MLP with NESTS before commencement. This would help in avoiding deviation in quantities and expenditure involving cutting, filling and earth protection works.
- ii. The finalization of Structural Drawings at DPR stage to arrive at correct estimation of RCC quantity will avoid future deviation. Before commencement of RCC work, Construction Agencies shall cross verify the quantities of reinforcement & RCC of vetted structural drawings with BOQ and any deviation shall be brought to the notice of NESTS immediately.
- iii. The Construction Agencies shall take adequate measures to avoid deviation at every stage of construction. In this regard, proper technical scrutiny of site conditions, layout, foundation, structural drawings, etc, involving competent technical manpower, Zonal Manager are essentially required. No expenditure beyond A/A & E/S provisions shall be permitted considering the budget constraint.
- iv. Submission of Deviation- Deviation Statement shall be submitted along with details of measurements, vetted structural drawings, approved architectural drawings & MLP as per MoU.

14. **Documentation and Photograph of ongoing construction:** - Construction Agencies shall have to continuously share the GPS enabled photographs of ongoing construction to the EMRS Civil & Construction Agency Coordination WhatsApp group. The photographs need be shared at every stage of construction for important items and milestones like foundation reinforcement, RCC casting of foundations, columns, beams & Slab, masonry work, etc and along with each running bill.

15. **Manpower Deployment:** -

- i. The Construction Agencies shall have to inform the details of the Nodal Engineer from the dedicated cell at the respective Construction Agencies' HQ with name, experience, designation, etc for coordinating with NESTS along with name, qualification (CA number of the Architect), experience of appointed architect and structural engineer for the EMRS work along with DPR.
- ii. Construction Agencies shall share the details of Site Engineer, Project Engineer for each location with name designation, experience before commencement of the work as per Clause 2.3 of MoU.

Provision of Clause 2.3 of MoU is reiterated "The Construction Agency shall nominate full time regular technically qualified and experienced engineers at each site for supervision, monitoring and execution of the project in time bound manner". The deployment of competent and experienced technical manpower is integral part of project management to ensure timely and quality construction of high valued project. The Clause stipulates provision of one Project Manager (regular) for every 4 site engineers" The clause 2.7 of MoU specifies also certain minimum standard of qualification and experience of technical manpower to be deployed in construction site."

16. **EMRS in North East/Hilly Area:** The construction of EMRS in the North Eastern region and hilly areas requires adopting construction & special design as per the available hilly terrain. The EMRS building may be planned along contour with special design to reduce the cost of construction. Every structure in hilly area is required to be designed as per availability of terrain of the land. Regarding roofing in high rainfall areas, the roof truss with pre-coated profile sheet roofing shall be considered in place of flat RCC slab roof for school buildings. The special planning and design in respect of North East Region and Hilly region are detailed below: -

- i. The school building shall be G +2 with pre-coated roof/flat roof depending upon rainfall intensity.
- ii. The Hostel buildings shall be G +2 including kitchen & Dining. No separate Kitchen and Dining Building.
- iii. Conceptual Architectural drawings for North East is enclosed at **Annexure A2**.
- iv. Conceptual Architectural drawings for Hilly is enclosed at **Annexure A3**.

The above guidelines, specifications, updated architectural drawings and procedures shall be followed henceforth. For the project needing special modifications, site specific approval shall be obtained. However, any deviation from standard norms of educational buildings, anomalies, etc in drawings shall be brought to the notice of NESTS. Further, Phase-II approval shall be conveyed only after compliance of all pending issues related to drawings, quality, vetting, etc of Phase-I Construction.

In view of above, Construction Agencies are requested to take up pre-construction activities like submission of Final MLP and Preliminary Estimates for issue of A/A & E/S for Phase-II and Single-phase construction, as the case may be, as per the guidelines mentioned above, so that, further construction activities like approval of DPR/Supplementary DPR, etc may be processed. The Likely Project Cost on completion of Phase-I shall be shared along with Preliminary Estimate of Phase-II in prescribed table indicated in the earlier guidelines dated 30.03.2022. The Construction Agencies shall exercise due care to submit the total Project Cost of Phase-I considering deviation, if any. These guidelines are in conformity of the Clause 3.22 of revised MoU with Construction Agencies and shall form part of agreement. These specifications and guidelines shall prevail over previous guidelines and shall also be applicable for upgradation work of KSP to EMRS in the state of Madhya Pradesh. The whole work of EMRS and Up-gradation shall be carried out in most systematic manner as per MoU and EMRS guidelines enclosed herewith.

Further, for any item to be procured by Construction Agencies relevant provisions of latest GFR/Ministry of Finance guidelines/CPWD Works Manual, etc is to be strictly adhered to. As per Agreement with NESTS in any case, the calling of tender, its publicity, assessment of reasonability of tender, its rates and awarding of work to the L-1 bidder is the sole responsibility of Competent Authority of the Construction agency.

This order issues with the approval of Competent Authority.

Encl.: As above.

Yours sincerely,



(Gourav Sharma),
Assistant Commissioner, NESTS

Copy to:

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