

RESTRICTED

**MILITARY ENGINEER SERVICES
BANGLADESH ARMED FORCES**



**COMPENDIUM
OF
MES ROUTINE INSTRUCTIONS-2008**

**PART – II TO VII
(PROVISIONAL)**

Approved By

MD ISMAIL FARUQUE CHOWDHURY
Major General
Engineer in Chief
July 2008

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SUPERVISORY TEAM



Overall Supervision

BA - 2062
Colonel Md Humayun Khan
Director of Works

Editing & Management

BA - 3209
Lt Colonel Md Nurul Huda
SO-I (Planning & Admin)

BA - 3037
Maj Abu Sayeed Md Feroz
SO-II (TE/REV)

P/No - 80325
SSAE B/R Md Akhtar Hossain

P/No - 80419
SSAE B/R Md Abu Taher Sarkar

P/No - 81371
SAE E/M Shehabul Islam Md Zabir

P/No - 8030101
Supvr F/S Gde-I Syed Mostafa Kamal

Composed By

P/No MES (Army) - 070014
UDA Shaiikh Samiul Kabir

P/No-8000589
O/A Md Anwar Hossain Talukder

P/No - 8030105
Supvr F/S Gde-I Md Shahjahan

P/No 8000123
H/Asst Kha M Jahangir Hossain

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BOARD OF OFFICERS

- President* : P/No – 80032
Superintending Engineer
Md Sayedul Islam Khan
CMES (Air) Kurmitola
- Members* : P/No – 80049
XEN B/R
Kazi Mahabub-Ul-Alam
GE (Navy) Dhaka
- P/No – 80077
XEN E/M
Md Nurul Huda
SO-II E-3/4, Works Directorate
- P/No – 80114
AXEN B/R
Shaiqfi Md Abdur Rafiq
AQS, CMES (Navy)
- P/No – 80149
AXEN B/R
Md Abdul Latif Miah
AQS, CMES (Air)
- P/No – 80154
SAO
Md Ahsanullah
DWLCE (Army)

Refs:

1. AHQ, E in C's Branch office order no. 150 dated 02-02-2007.
2. Board of officers submitted vide CMES (Air) Kurmitola letter no PF/80032/89/E-1 dated 29/05/2007.

AMENDMENT RECORD SHEET

Amendment List		By Whom Amended	Date of Insertion	Initials
Number	Date			
(a)	(b)	(c)	(d)	(e)

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COMPENDIUM OF MES ROUTINE INSTRUCTIONS-2008



PREFACE

1. This Compendium is issued under the authority of Engineer in Chief and applies to the three services and inter services organization. It was first issued in the year 1952 and then amended in 1962; it was revised again in 1990. Owing to the passage of time and due to the changes after reorganization of the MES, certain amendments etc were needed to be made in the instructions. It has, therefore, been revised (Part II-VII) for the present edition 'July 2008' incorporating all amendments made to date.
2. The publication is printed and assembled in the following forms:
 - a. Compendium containing six parts (Part II–VII) bound in one volume.
 - b. Each part of the compendium is bound separately concerning different chapters.
 - c. Part-I establishment is also issued separately on 21 July 2008.
3. The compendium supersedes previous editions and all Routine Instructions issued hither-to-force. This volume (Part II–VII) will be treated PROVISIONAL for next two years. Fresh edition will be issued thereafter.
4. This publication is issued in loose leaf form so that pages may be inserted as and when necessary.
5. Officers of Works Directorate made an effort to compile and fix up the duties of every individual involved in these instructions. I appreciate their hard work and sincere effort. Almighty Allah may bless us all.

MD ISMAIL FARUQUE CHOWDHURY
Major General
Engineer in Chief
E in C's Br, AHQ

21 July 2008
Dhaka Cantonment

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**MILITARY ENGINEER SERVICES
BANGLADESH ARMED FORCES**



PROVISIONAL
COMPENDIUM
OF
MES ROUTINE INSTRUCTIONS-2008

PART – II
WORKS

PUBLISHED BY: AHQ, E IN C'S BR, WKS DTE, DHAKA CANTT.

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CHAPTER - I

ROUTINE INSTRUCTION NO - 201/2008
RECCE, PLANNING OF WORKS – SITING BOARD,
PREPARATION OF ESTIMATES & THEIR
TECHNICAL SCRUTINY

1. **Planning of Works.** Procedure for planning of works for the three services is laid down in PAO No. 885/59, BAF Order No. 86 and Naval HQ No. WK/4012 of 18 Dec 61.
2. **Siting Board.** The SPAO No 16/70 issued by erstwhile Govt. of Pakistan is attached as Annex 'A' to this R.I. for the guidance of MES officers nominated as members of siting boards.
3. **Preliminary Information.** In order to be able to advise and guide the siting board, the MES officers should collect and have ready at the first meeting of the siting board, information on the following points, where such information is definitely not applicable to the particular siting to be carried out:
 - a. **Rainfall** – Average annual and maximum intensity.
 - b. **Temperatures** – Maximum and Minimum.
 - c. Prevailing Wind and Maximum Wind velocities to be expected.
 - d. Existing roads in or giving access to the site with type, width and present condition.
 - e. **Railway** – Nearest railway Station, gauge of railway, whether single or double.
 - f. Existing water supply with source, daily yield, storage, purification arrangements and supply of irrigation water, if any.
 - g. Existing Electricity supply AC or DC Power Station and HT/LT distribution.
 - h. Existing accommodation including number and type of personnel to be accommodated, technical accommodation etc.
 - j. Nearest Village.
 - k. Existing Mosques, tombs and graveyards.

- l. Existing Sewage disposal system.
- m. Level of Water Table.
- n. Areas liable to flood, ascertained by local inquiries.

4. **Preliminary Site Plan.** A preliminary meeting of local MES Staff should be held to prepare a suggested Site plan on which proposed siting should be shown for consideration by the siting board. This will save much time at the siting board meetings. A suitable way of showing the suggested siting is by means of cuttings of building etc. which can be moved and adjusted as required. For projects costing over Tk. 10 Lac, the respective DW&CE will inform the E in C for necessary direction whether his rep. will attend the siting board or DW&CE will represent on his behalf. The preliminary plan can be a part of Cantonment plan or an enlargement from a survey of Bangladesh Map. The following should be shown on the preliminary plan except where not applicable:

- a. Scale.
- b. North point.
- c. Datum point to assist siting on the ground.
- d. Prevailing wind.
- e. Permanent features such as hills nallahs etc.
- f. Existing roads with type and width.
- g. Existing Railways.
- h. Boundary of defence Department Land.
- j. Existing storm water and sludge drainage.
- k. Existing water supply including pumping stations, reservoirs and mains.
- l. Existing sewers and sewage disposal works.
- m. Existing electric supply including power station or transformer and HT/LT distributions.
- n. Existing buildings- Military and Civil.
- p. Mosques, romps and grave-yards.

5. **Advice and Guidance to Siting Board.** The MES officers should bear the following points in mind when giving advice and guidance to the siting board:

- a. The area selected should have good natural drainage. Areas liable to flood should be avoided.
- b. Broken or steeply sloping (1 to 30 or steeper) ground should be avoided owing to the extra earthwork and additional costs due to stepping plinths of buildings.
- c. At hot stations, buildings should be orientated with their lengths running East and West. At stations of high humidity where maximum natural ventilation is required, buildings should be orientated with their length at right angles to the prevailing wind.
- d. Block cotton soil and other heavy clays should be avoided owing to the foundation difficulties which they cause.
- e. Ribbon development on both sides or on one side of a main road should be avoided.
- f. It should be ensured that the siting of power house, pump house, E/M staff Qtrs. and E/M Stores, if included in or affected by the project, is dealt with by the Board.
- g. While siting should aim to maintain, as far as possible, a ratio of 1:7 in relation to the covered area and open space, and if it is not possible due to unavoidable circumstances, the minimum ratio should be 1:4.

(1) A final site plan will be prepared to accompany the siting board Proceedings and will give all the information mentioned in para 3 which is required to be shown in the Preliminary Plans.

(2) To the siting board proceedings will also be added plan (s) showing spot-levels of either the entire site at 30.00 M intervals, or where the site is too large and only a few buildings are located on it, then the spot-levels will be shown for the area on which each building is sited. Spot-levels of existing roads at various places will also be shown. In the case of large buildings, spot-levels under the four corners will be marked. All levels will be related to a fixed B.M. which will be clearly shown on the site plan.

(3) The office preparing design and contract drawings will fix the plinth level of each building in relation to the ground levels indicated by the spot-levels shown on plans attached to the siting board proceedings. Should it become necessary during execution to alter the plinth levels shown on the drawings, prior approval of the office preparing the drawings will be obtained.

(4) The office preparing contracts will invariably attach a site plan and the plan (s) mentioned in para 5. g. (3) above with the contract drawings.

6. **Preparation of Estimates.** Guess Estimates (Para 275 Regulations for the MES). Guess Estimates are based on known costs or rates for similar works suitably adjusted; or in the case of machinery on manufactures or DGDP. The costs of imported items, suitably grouped, should be shown separately; Such items are land acquisition, individual buildings or groups of buildings, roads, water supply, electrical installations, drainage, special establishment, political charges for protection, royalties for local materials, etc. As it on approximate estimates that decisions as to policy and finance are made, it is important that the probable costs are not understated.

7. **Project Estimate.** The following points to be considered:

a. As the preparation of project estimates is taking in hand before the Technical and Administrative Sanction is accorded, it is important that no Project Estimates be undertaken unless necessity of project has been accepted by CFA.

b. The project estimates will be prepared on the forms BAFW-1840, 1841, 1844 & 1845. For Electric and Water Supply Estimates, details given in succeeding paras 12-13 will be complied with. Time for execution will be stated in brief history of BAFW-1840.

c. The Minor Work estimates will be prepared on BAFW-1842 & 1843 according to the instructions printed on these forms.

d. The estimates both for projects and minor works will be priced on MES Standard Schedule of Rates. The prevailing percentage will be added / deducted at the end of estimates. For the purpose of adding/ deducting percentage at the end of estimates, each DW&CE

/CMES/ GE/AGE will maintain a monthly chart showing prevailing percentage in his area.

e. The E in C's Standard Type plan will normally be followed and the Drawing Nos. quoted in the estimates. Where there is no Type plans, line plans will be drawn in the relevant cols, of BAFW-1840 but detailed drawing will not be undertaken at this stage. Only in case of special or complicated buildings detailed drawings will be undertaken at this stage.

f. MES Schedule of Rates will be our yardstick in all future estimates, contracts, bills of quantities and payments. For the purpose of project & minor works estimates, it will not be necessary to work out a detailed estimate and price it on the Schedule of Rates, but plinth Area Rates already available may be used by reducing them back at par. Such rates will gradually be available with each DW&CE/ CMES/ GE/AGE in due course of time specially when we let contract on B/Qs. Although PA Rates will be used in the estimates, but the words "based on MES Schedule of Rates at PAR" will be inserted in the remarks column BAFW-1840.

g. Allowance must be made in the estimate for all incidental expenses such as clearing and leveling sites, protection charges etc. 2 percent will be allowed for work charge special- staff for drawing and supervision on the total cost of the estimate.

h. 5 percent for contingencies will be added to the net total. Contingencies for large buildings and road estimates should be provided for from 5 to 10 percent of the net total of the estimates. As regards Civil Works see Appendix 'C' Regulations for the MES.

j. It is convenient that building should be shown in the order given in Barrack Synopsis. Items, which require the sanction of the Government will normally be shown separately. Special provision be made in project Estimate where necessary for the following:

- (1) Tempy : Storage accn.
- (2) Tempy : Site Office accn.
- (3) Tempy : Living accn, for construction staff.
- (4) Special Tools & Plants.

Note: The usual method of calculating cubic contents of buildings, for cube rate estimate purposes, is as follows:

1. The length of the main block is multiplied by the breadth (in both cases measuring from out to out of the walls above the plinth) and the product is multiplied by the height taken from half way down to the bottom of the foundations to half way up the slope of the roof (excluding the projecting caves beyond the outside edge of the main walls), or to the top of flat roof excluding parapet walls.

2. Verandahs Porches, dormers, large chimney stacks, etc are dealt with similarly but separately.

8. **Technical Sanction.** The followings points to be considered:

a. Technical sanction will be accorded by the Competent Engineer Authority on the first page of the project estimates/Minor work estimate for the project/Minor works as a whole. Space has been provided on the BAFW-forms for this purpose.

b. As Tech Sanction will be accorded on the estimates, and to avoid revision of the Administrative Sanction, it is now imperative to spend more time on estimating stage, which we used to spend after the Administrative Approval. To help covering all possible points involved in a project, it will be necessary to complete the questionnaire given in the project estimate form BAFW-1840 with great care.

c. Period up to which the Tech sanction will remain valid will be stated on the first page of the project estimates/Minor work estimates normally this period will be one year.

9. **Administrative Sanction:** Administrative Sanction (Approval) will be accorded by the CFA after the Technical Sanction has been accorded on the Estimates for the Project as a whole as stated above.

10. **Contract Action:** After approval has been accorded and funds allotted or intimation received that funds will be made available in a specific financial year, the responsibility for further detailed planning will be as follows:

a The competent engineer authority who accorded the technical sanction will decide for each administrative sanction, as to how many contracts will be let and by whom. The preparation of detailed drawings will be undertaken at this stage.

b The E in C is the highest technical authority for the Defence services including other MOD organization and has full Contractual/Tendering powers for construction works and purchase of stores and may re-delegate the Contractual power in full or in part to the Chief Engineers. Primarily the tendering is done by the Chief Engineers (CE) and if the contract amount exceeds the contractual powers of the CEs the tender documents shall be referred to the E in C for scrutiny and approval to be taken before the acceptance by the Chief Engineers. E in C may sparingly tender for the works of inter services or of complex nature.

c Contractual powers for DW&CEs, CMES, GEs & Independent AGEs are given in Table 'B' of MES Regulations and sub delegation of financial power of PPR. Tenders can be invited and contracts accepted by these authorities within their respective contractual powers irrespective of the fact whether the project as a whole falls within the power of the accepting officer or not.

11. **Deviations on Contracts.** Change in specifications and or scale up to a limit of 10% before or after the contracts are let, will require the prior approval of Competent Engineer Authority/Admin Authority who accorded Technical/ Admin Sanction. If the changes are going to increase/decrease the cost by more then 10% revised Tech Sanction and Admin Sanction will be necessary.

12. **Electrical and Water Supply Installations.** While preparing the estimate on BAFW-1840 etc. the items will be shown in the following sequence:

- a. Installed machinery and plant including foundations and all accessories. The necessary piping and cabling is to be included with the appropriate item. This is estimated for by lump sum under the following items:
- (1) Boilers.
 - (2) Feed Plant.
 - (3) Economizers and Super heaters.

- (4) Steel Chimneys
 - (5) Fuel handling and storage plan.
 - (6) Generating Sets.
 - (7) Circulating Water plant.
 - (8) Starting auxiliaries.
 - (9) Balances, Boosters, Condensers etc.
 - (10) Lubricating Oil handling plant.
 - (11) Switchgear and protective devices.
 - (12) Overhead Crane.
 - (13) Workshop Plant and odd Tools.
- b. Other buildings including quarters for staff. Number and type of the quarters must be justified in the report.
- c. **Transmission System.** Report should explain reasons for adopting cables or aerial lines.
- d. **Sub-station Structures.** Line plans showing buildings or enclosures and plant proposed should be drawn on BAFW-1840. Sub-station plant including switchgear, transformer plant housed in power houses.
- e. Distribution including service lines and meters.
- f. **Recurring Charges.** These include the following items:
- (1) Estimate of annual output of units.
 - (2) Details of staff and pay.
 - (3) Estimated annual maintenance and operation expenditure on BAFW-1788.
 - (4) Estimate of probable “all-in-cost” per unit.
 - (5) Estimate of probable recoveries from paying consumers, based on Appendix-‘O’, MES Regulations.

In Register of Military Installation and plant annual returns (BAFW-1836) the capital cost of (c), (d) & (f) is included under the main heading “External Distribution”. Item (a) will be added to item (b) under “Other Buildings”. Estimates will be accompanied by detailed calculations and plans.

13. **Project Estimates for Water Supply Installations.** In the report on BAFW-1840 will be given the following information:

a. Calculation to show that the maximum supply required is available throughout the year will be attached. Analysis and reports to quality, necessity or otherwise of purification, whether the local medical authorities accept the supply, reliability of the proposed supply from an internal accuracy point of view, and calculations for daily consumption, showing entitled and non-entitled consumers separately; will be shown on a general plan showing sources of supply, position of reservoirs, pumping plant filtration plant and layout of all piping as mentioned in BAFW-1840. Reduced levels will be shown for all important places, e.g. high and low water mark at sources of supply, suction pumps, pumpstop and bottom of service reservoirs and general levels in area of supply.

b. The estimate of costs (BAFW-1840) will be arranged as follows:

(1) Supply works including catchments reservoirs, dams, catchments areas, channels, and supply pipes up to and including the suction sump in the case of pumped supplies but not including the secondary stage reservoirs in the case of gravity supplies or supplies from outside agency.

(2) Filtration and Treatment, i.e. settling and coagulating tanks, filter softeners and other treatment plant. A report giving reasons for adopting the proposed type and calculations for capacity of plant to deal with the maximum demand.

(3) **Installed Machinery.** This will be estimated by lump sums on BAFW-1840 under the following items as applicable:

(a) Engine driven pumping sets.

(b) Motor driven pumping sets.

(c) Other applicable items of connected power plant as in electrical estimates.

(4) **Pumping Station Buildings.** A line plan is required if standard plan is not available.

(5) **Other Buildings Including Quarters for Staff.** Necessity for number and type of building proposed must be justified.

(6) **Rising Main.** Line plan and elevation of proposed alignment, calculations for flow, friction loss and static head.

(7) Storage reservoirs (other than original catchments reservoirs), calculations for capacity and suitability.

(8) **Distribution System.** Includes everything beyond storage reservoirs up to and including meters and stop cocks of house services and also street stand pipes and subsidiary service tanks. Schedule will be worked out showing in detail the quantities and sizes of all pipes, specials and fittings required. Line diagrams of proposed layout showing probable demands at all points of supply and calculations for piping showing residual head of all points.

(9) **Water Rate.** An estimate of the probable all-in-cost of water per thousand litres will be attached.

(10) **Recurring Charges.** An estimate of probable amount of water pumped, details of staff and pay proposed, estimates of annual maintenance and operation expenditure of BAFW-1806.

14. **Electrical and Mechanical Services-Miscellaneous Instructions.**

a. Heating of buildings, except by open fires, and hot water system, lightning protection of buildings, sewage disposal installations etc. will be taken up separately. Design of such heating installation will be based on general engineering practice.

b. When a MES water supply or other installation involves expenditure in connection with the supply of electric energy (e.g. cost of supply lines meters, etc.), the cost of such items will be included in the water supply or other installation estimates. The cost of any electric plant put into an MES generating station on this account will be treated as a separate estimate pertaining to the electrical undertaking.

c. The report on the estimate for the water supply or other installation will, however, contain a reference to the relevant additions to or alteration in the electrical generating plant.

15. **Technical Scrutiny.**

a. The object of technical scrutiny is to ensure that a good and economical standard of design, specification, estimating and

construction is maintained, that the work actually done and billed for is as nearly as possible identical with sanctioned plans and specifications by undertaking actual check measurements on the site where necessary, that no excess payment due to technical misinterpretation either of design and specification or of contract documents is allowed, that special rates claimed are applicable and have been approved by Competent Authority and that quantities of store issued to contractors bear fair comparison with those actually required for the various items of works for which the stores were issued. For this purpose technical sections under the charge of SAE/Overseer are ordinarily provided in the office of GE/AGE who are primarily responsible for technical scrutiny of work estimates, bills, muster roll etc. The extent of such scrutiny will be decided by DW&CEs.

b. The technical check of bills by SAE/Overseer includes:

(1) Measurement Book Check of:

- (a) Figures in Timesing and No. columns
- (b) Deductions.

(2) Abstract-Check of:

(a) Total quantities with Contract documents, Deviation orders, etc.

(b) Reduction to correct unit for payment. This should be carried out on the abstract and never in the measurement book.

(c) Comparison of description and prices of items in the abstract with description and prices of Schedule or BQ items, SAE/Overseer will see that they agree and are applicable to work done.

(d) Special rates claimed, SAE/Overseer would see that they are applicable and have been approved by Competent Authority. He is also responsible for preparing or checking special rates in the first instance.

(3) Stores issued to Contractors: Check quantities issued with quantities actually required for the work done under the various items for which the stores were issued.

(4). Stores or Materials Received from Demolitions: Check disposal of those absorbed in reconstruction.

Note: Routine clerical check of descriptions of items in measurement book with those on abstract, arithmetical check of squaring of dimensions costing and money calculation will be done by the Account section.

(5) Check of description in measurements book, SAE/ overseer will see that they correctly represent the work carried out. Check of actual measurements, should be carried out on the site by the SDO, GE, AGE or AQS as the case may be. AQS and his staff are provided with each CMES and DW&CE. The duties of AQS and his staff are laid down in Regulations for the MES.

c. On technical examination matter, the AQS will correspond direct with GE/AGE and sign for the CMES. The AQS will also address SFC(W) direct in connection with the questions arising out of technical examination of bills.

d. The detailed procedure for referring bills before or after payment by SFC (Works) to the T.E. and/or the AQS staff will be laid down by the CGDF in consultation with the E in C.

16. **Valuation of Buildings**

a. The difficulty in valuing buildings in cantonments arises from the fact that buildings have to be considered as divorced from the site on which they stand. There are well known and accepted methods of valuing buildings and land considered as a whole but these cannot be applied to normal resumption cases as there is no data for determining the value of the site for deduction from the combined value of building and site, since land in Cantonment is not sold in the open market.

b. It is, therefore, necessary to adopt a system that will give the owner a fair compensation for his buildings as such, proper allowance being made for the type of construction and depreciation. As all valuations have to be substantiated in a Court of law it is essential that they should be supported by accurate details.

c. The procedure lay down in Annex - D will be adopted with variations where necessary, to suit special local conditions.

17. Expenditure Return for Major Works and Abnormal Repairs.

a. Master copies of the Monthly Expenditure Returns for Projects and abnormal Repairs in respect of all Heads except maintenance, will be compiled on BAFW-2251 by GEs/AGEs and a copy will be sent to respective DW & CEs, CsMES and SFC(W) in July each year.

b. The above master copies will be maintained and kept up to date in the offices of the DW&CE and CsMES from Monthly Return PAFW-1835 Columns 3-6. To keep SFC (W) master copy up to date, the GEs/AGEs will initiate a monthly shorter report on BAFW-2251-A. as per Annex - B In case of new work, amendment will be sent to SFC(W) on BAFW-2251.

18. Monthly Expenditure Return for Maintenance and Minor Works-Detailed Heads other than Major Works and Abnormal Repairs. This expenditure return will be prepared by GEs/AGEs and submitted monthly to respective Sta HQs, SFC(W) and CsMES on BAFW-2251-B, Annex-C.

19. Maintenance of Inventories of Fittings and Fixtures of Hired/Leased Bungalows.

a. Maintenance of correct and up to date inventories of fittings and fixtures of hired/leased Bungalows is essential and is not to be neglected. These inventories form part of hiring agreement and as such must be on record with the MEOs. When taking over hired/leased Bungalows from the MEOs, the MES representative must obtain these inventories from the MEO and keep them on proper record on the following proforma:

PROFORMA

Ser	No of hired/leased Bungalows on charge	No for which inventories received from MEO	Remarks
(a)	(b)	(c)	(d)

b. In case where MEOs are unable to produce an inventory they will be asked to prepare one which should be checked at site by MES representative and finally got signed by MEOs Having once obtained the initial inventories these will be maintained properly and kept up to date. Any addition or alteration will be shown under proper authority.

This supersedes Routine Instruction no 218 of 1990.

COPY OF ERSTWHILE SPECIAL
PAKISTAN ARMY ORDER NO 16/70

Key Plan Recce/Siting Boards for New Works/Projects-Procedure for

1. Guidance for the members detailed in the siting board had been published in PAO 504/65.
2. However, during ground inspections and perusal of siting board proceedings, it has been noticed that there is still room for improvement in the siting/layout buildings and preparation of siting board proceedings.
3. Siting board proceedings are generally deficient of the following essential details:
 - a. The users' requirements is either not attached or not properly filled in. In many cases, instead of giving details of the buildings required, vague remark such as "NA", "as per standard plan" etc are inserted without ascertaining whether standard type plans are available or not.
 - b. Separate Performa is not prepared for different type of buildings.
 - c. The purpose/function for which accn is required is not indicated.
 - d. The users' requirements are not carefully studied and scrutinized while recommending additional accn.
 - e. Proper utilization of existing accn is not taken into account while working out addl demands.
 - f. The overall master plan of the cantt including future development and expansion is not kept in mind while siting new works.
 - g. The accn is not suitable grouped to enable provision of pooled facilities for convenience and economy.
 - h. The external services are not carefully planned and correctly dovetailed with the existing facilities.

- j. The capability of the existing services to take the addl load is not properly evaluated.
- k. Storm water drainage and its disposal is not carefully considered and planned.
- l. Line plans of non-standard buildings are either not attached or not signed by the users.
- m. The buildings are not properly orientated to suit the local climatic conditions and environments.
- n. The direction of North is not marked on the site plan to enable checking the correct orientation of the buildings.
- p. Proper contours and spot levels are not clearly shown on the site plan.
- q. External services are not marked properly on the site plan in different and distinct colours.
- r. Existing services are either not shown or, if shown are not legible.
- s. Site plans are not signed by the president and the members/ engineers.
- t. Details of work on site clearance are nor indicated. Buildings to be demolished are also not shown in the site plan and the cost of demolition not indicated in the proceedings.
- u. The siting board questionnaire proforma is not carefully and properly filled in. Most of the questions are often answered as 'NA' which serves no useful purpose. In some cases, the proforma is not attached at all.
- v. The siting board proceedings are not vetted by the CMES as required vide para 7 of PAO 504/65.
- w. The aspect of availability of land and ascertaining whether it belongs to the cantonment or is to be acquired is often overlooked. The problems associated with the acquisition of land incl time factor involved are generally not taken into account.
- x. The proceedings are not finalized and submitted in time.

4. It has, therefore, been felt necessary to recompile in a compact form the various orders and instructions issued from time to time, with a view to high-light some salient points to achieve better siting/layout of buildings and more comprehensive and accurate siting board proceedings, thus reducing the number of queries and frequent back reference during various stages of processing of admn sanction.

5. **Aim.** The object of a siting board is to collate user's requirements, essential local/Engr data and recommend suitable site/sites for the project with services, with a view to enable Engrs to plan meeting the user's requirements efficiently and economically in conformity with sound engineering practices.

6. **Types of Boards.** As a rule, the following two types of boards are required for siting of new works:

- a. Key Plan Recce board for studying the users requirements and submission of recommendations to MOD for acceptance of necessity.
- b. Siting board for detailed siting of the approved works and preparation of a site plan for final approval of the appropriate authority.

7. **Composition.** Siting boards will be appointed under Fmn/Sta arrangements as follows:

a. **Army Works**

President- Sta Comd of the respective station HQ

- Members-**
- (1) Rep of Area HQ/Log area
 - (2) Rep of user unit/organization
 - (3) Sta Health officer (SHO)
 - (4) MEO/Rep of MEO
 - (5) GE/Indp AGE
 - (6) ATO (wherever applicable)
 - (7) CDSO concerned
 - (8) SSO

b. **Navy Works**

President- Commanding Officer of Base

Members- (1) Rep of Area Commander
(2) Rep of user unit/organization
(3) Medical officer of the Base
(4) MEO/Rep of MEO
(5) GE/Indp AGE
(6) Concern ATO/ Spl Gunnary officer (Wherever applicable).
(7) Concern CDSO/ communication officer.
(8) NBO

c. **Air force Works**

President- OC Admin of Base

Members- (1) Rep of Base/ User unit / Sqn
(2) Medical Officer of Base/Unit
(3) GE/Independent AGE
(4) MEO/Rep of MEO
(5) Communication Officer of the Base/ Unit.
(6) OIC Security Sqn

Note: The composition of Key Plan Recce board will also be the same as for the siting board except than the reps of services HQ will not be normally included. In special cases where the presence of a particular rep of services HQ is considered necessary, the formation concerned may approach services HQ for the purpose.

8. **Convening of Boards.**

a. Where considered necessary, a Key Plan Recce board will be convened under orders of Sta/Sub Area Comd to submit recommendations to respective CFAs/AHQ for acceptance of necessity. After the necessity of work has been accepted, a siting board will invariably be convened under orders of OC Sta in accordance with AR (I) 364 (AR Vol II) to submit recommendations for final approval of the appropriate auth.

- b. In very exceptional cases, the two stages of Key Plan Recce and the siting board are sometimes combined to telescope time.
- c. The boards will be properly briefed in all cases personally by Comds Div/Sub Area/Sta before these are held and proceedings should be scrutinized before submission to AHQ.
- d. Where projects require the presence of a rep from other depts. such as Railways, Forest etc, he will invariably be informed well in advance.
- e. A certificate will be endorsed by the MEO concerned that the affected lands are Defense owned or can be acquired without any major hitch. In cases where MEO is not available to attend the Board, his SDO will be associated but the certificate will be countersigned by the MEO.
- f. Where possible, a notice of minimum of two weeks will be given to reps who are detailed to attend the Board. The date for convening the Board for works over Tk. 10 lacs will only be notified after confirmation from M&Q Dte, AHQ.
- g. User's reps must be fully briefed by their heads of depts. so as to be able to put across user's view point clearly.

9. **Requirements of Board Proceedings.**

- a. The proceedings of the Key Plan Recce board must include the following details:
 - (1) A detailed statement of the case substantiating the necessity of the work.
 - (2) Purpose/function for which accn is required.
 - (3) Personnel, vehicles & equipment to be accommodated.
 - (4) Detailed statement of accn required.
 - (5) The Questionnaire of users requirements as per Annex 'A' to this SBAO duly completed in all respects by the users. (A separate questionnaire will be completed for each type of building and the questionnaire may be amplified to give further information not covered by the questions included therein).

- (6) Reference to standard type plans for the accommodation required or, in case standard type plans are not available, the line plans of the proposed buildings. The preliminary drawing/line plan along with comprehensive data required for development of detailed design as per DW&CE (Army) Technical Bulletins No. 43 and 43-A must accompany the siting board Proceedings.
- (7) A tentative site plan showing requirement of external services.
- (8) Communications requirements (both road and rail).
- (9) Training requirements are facilities available.
- (10) Community demands and amenities like institutes play grounds etc.
- (11) Security requirements.
- (12) Predictions of future requirements /expansion.
- (13) Any special requirement.
- (14) An engineer appreciation and indication of cost.

b. The siting board proceedings must always include the following details in addition to the info vide sub para 'a' above.

- (1) The site plan as per sub para below indicating the exact location of the proposed work and the location of the surrounding buildings and installations.
- (2) Line or type plan design of the building or installation.
- (3) Land requirements showing clearly Government or privately owned land with correct dimensions. Military Farm land or class C Cantt lands will not be recommended for acquisition for construction works without clearance from AHQ first.
- (4) Electric and power requirements indicating existing power mains and distribution system.
- (5) Sewage disposal.
- (6) Water supply requirements indicating existing distribution system.

- (7) Storm Water drainage.
- (8) Internal roads and paths.
- (9) Fittings and Fixtures.
- (10) Any special services such as air-conditioning, fire hydrants, fencing and perimeter lighting etc.
- (11) Questionnaire for the siting board.

Note: In case the two stages of Key Plan Recce and the siting board are combined to telescope time, the proceedings must contain the details mentioned in sub-para 'a' and 'b' above.

c. **Site Plan.** A final contoured site plan will accompany the siting board proceedings showing, inter alias, the following info:-

- (1) Scales.
- (2) North Point.
- (3) Prevailing winds and maximum speed.
- (4) Permanent features, such as hills, nallahs etc.
- (5) Existing Roads leading to the site with types, width and top level giving the condition of the road.
- (6) Existing Railway and nearest Railway station, whether single or double.
- (7) Boundary of Defense Department land.
- (8) Existing storm water and sludge drainage.
- (9) Existing water supply including pumping station, reservoirs and mains with their size, or any other information which may be useful.
- (10) Existing electric supply including power station, conductor size and HT/LT distribution.
- (11) Existing sewers and sewage disposal works.
- (12) Existing Buildings, Military and civil.

- (13) Mosques, tombs, grave yards and nearest village.
- (14) Proposed buildings.
- (15) Proposed external services and distances involved. (Most important point to cut down expenses.)
- (16) Proposed plinth levels.
- (17) Level of water table.
- (18) Areas liable to floods including local inquiries.

Note: The site plan attached with Board Proceedings will also show the spot levels of sites and roads where necessary at any convenient interval with the B.M (Bench Mark). The scale of site plan will be 32" or 64" to a mile. Buildings proposed to be demolished will clearly be indicated on the plan. Their MES No. present use, book value and expected credit will be indicated in board proceedings.

10. **Important Points for the Guidance of the Board.** The following points will be borne in mind while selecting sites for Army Buildings:

- a. The Area selected should have good natural drainage. Area liable to floods should be avoided.
- b. Broken or sloping (1 in 30 or steeper) ground should be avoided (if possible) owing to the extra earthwork and additional cost due to stepping plinths or buildings.
- c. Black cotton soil and other heavy clays should be avoided owing to the foundation difficulties which they cause.
- d. Ribbon developments on both sides or on one side of main road should be avoided.
- e. It should be ensured that the siting of powerhouse, pump house, reservoir, E/M staff quarters and E/M stores if included in or affected by the project, is dealt with by the Board.
- f. Proximity to the existing facilities is an important factor cutting down expenses on external services. The existing facilities should be carefully evaluated to ascertain their capability to take the additional

load. Maximum attention will be paid to curtail the requirements of essential services e.g. roads etc to the minimum. Economy will be the guiding factor.

g. Careful survey of surroundings should be done to site prestigious buildings like offices, Messes, SM barracks on/facing the main roads to achieve architectural harmony and enhance aesthetic values.

h. Latrines, bath rooms Dhobi ghats and other unsightly structures should be sited away from the public roads.

j. At hot stations buildings should be orientated with their lengths running EAST and WEST with verandah to the SOUTH. At stations of high humidity, where maximum natural ventilation is required, buildings should be orientated with their lengths at right angles to the direction of prevailing wind.

k. The buildings should be sited into suitable functional groups e.g. JCO's, OR's and followers quarters should be grouped into community area and sufficiently segregated from each other to provide pooled facilities and privacy to the families.

l. The arrangement and relative positioning of SM Bks, Quarter guards, school, kotes etc, should be such as to allow correct, smooth and easy circulation of daily programmes keeping movement plan in mind. It should also meet the security requirements of guarding kotes, stores etc.

m. Safety distances/requirements laid down under the regulations should be kept in view while siting Ammo/ Explosive stores, POL stores, ranges, training areas etc. as per advice of the experts concerned.

n. Sufficient space should be reserved for parks, play grounds etc. in the initial stages of planning.

p. Buildings should be sufficiently apart to avoid impression of over-crawling and restricting circulation of air.

q. Preservation of natural surroundings should also be considered and sufficient ground reserved for arboricultural schemes.

11. **Responsibilities of the Members.**

- a. The president of the board will make sure that:
 - (1) Medical representative has checked the hygienic aspect.
 - (2) MES representative has selected the most economical site especially for external services i.e. nearest to the existing roads, water and electric supply and sewage and storm drain etc. which is not congested and is properly orientated besides privacy from neighbourhood and that all engineering data as far as possible has been given.
 - (3) Local station representative has kept the local bus routes, distance to children school and market etc. in view.
 - (4) Local/Formation/AHQ representative has kept the future developments in view.
 - (5) MEO representative has certified that the affected land is Defence owned or can be acquired without hitch.
- b. The responsibilities of the various members of the siting board are enumerated in some detail in the subsequent paras. It may, however, be borne in mind that the duties listed herein are by no means exhaustive and every member detailed in the siting board is expected to make himself fully conversant with the spec/tech requirements he has to represent and get full briefing from the head of service/department concerned before attending the board, to enable him to put across his view point clearly.

12. **President.** The president of the board will ensure that:

- a. The instructions contained in this BAO and other relevant orders on the subject are carefully studied and strictly complied with in all respects.
- b. All members of the siting board are properly briefed about the purpose and scope of the board and that they are fully conversant with the requirements they have to fulfill.
- c. The points enumerated in para 10 above and other essential requirements are meticulously taken into consideration in siting the buildings.

- d. The advice of the experts is sought whenever necessary.
- e. All requirements listed in para 9 above are complied with in preparation of the board proceedings and the site plan.
- f. The user's requirements program and the siting board questionnaire duly completed in all respects are attached with the board proceedings.
- g. The siting board proceedings are comprehensive and complete in all respects, and got vetted by the CMES concerned before submission to the convening authority.
- h. The proceedings are signed by all members before dispersal of the board.

13. **Users Representative.** He will be responsible to:

- a. Prepare and produce complete data of users' requirements to include the following:-
 - (1) Detailed statement of accommodation.
 - (2) Purpose/function for which accommodation is required.
 - (3) Whether authorized in Barrack synopsis or outside the laid down scales.
 - (4) Personnel, vehicles and equipment to be accommodated.
 - (5) Requirements of essential services like water supply, electricity, sewage disposal etc.
 - (6) Communications requirements both rail and road.
 - (7) Training requirements and facilities available.
 - (8) Any special requirement.
- b. Complete the user's requirements proforma with the assistance of the MES reps and get it signed by the OC Unit or formation staff officer.
- c. Liaison and co-operate with MES reps in adhering to standard type plan designs as far as possible.

- d. In case of deviation from or non-availability of the type plan designs, get preliminary drawing/line plan prepared with the help of local MES staff.
- e. Put across the user's view point on siting buildings in suitable functional groups.
- f. Suggest arrangement of various types of buildings (offices, SM BK, Qtr gds, Kotes etc.) and their relative positioning to allow correct smooth and easy circulation of daily programmer.
- g. Provide any other info/data concerning the users, required by the board.

14. **Engineer Members.**

- a. The MES member (PE/GE/AGE), besides looking for the normal requirements such as suitability of soil, water supply and electricity etc. will also keep in mind the following points:-
 - (1) Orientation.
 - (2) Congestion
 - (3) Privacy-from neighborhood.
 - (4) Traffic services.
 - (5) Possible adjacent future developments.
 - (6) View/landscaping.
 - (7) Drainage.
- b. He will advise the board in selecting the most economical site with a view to curtail expenditure on external services, max utilization of existing facilities proper orientation of buildings and avoidance of congestion.
- c. He will help the board in the preparation of the site plan and ensure that the board proceedings are complete in all respect with regard to technical details. Responsibility for producing the contoured plans as per para - 9 (c) will rest with the GE/AGE concerned.
- d. He will emphasize the importance of adhering to the standard type plan designs and insist upon the members of the board, particularly the user's reps, to adopt the type designs as far as possible. In case resorting to non-standard designs is absolutely inescapable, he will

prepare preliminary drawings/ line plan in collaboration with the users reps for attaching with the board proceedings.

e. He will be responsible for completing the questionnaire for the siting board as per Annex - B to this BAO. This questionnaire will form part the of the board proceedings.

f. The MES member will also advise the President and the board specially if any point given in para - 10 antes is not clear.

g. He will be responsible to prepare a realistic guess estimate and indication of cost for the works.

h. The CMES concerned will endorse the siting board proceedings to ensure correctness of all technical details and that no essential date is missing.

15. **Medical Representative.** His duties will include the following:

a. He will be responsible to carefully study the environments of the proposed site and advice the board on the hygienic aspects.

b. He will ensure that:

- (1) Low lying and marshy areas are avoided.
- (2) The proposed site has good natural drainage.
- (3) No breeding places for mosquitoes and files e.g. ponds open sewers, rubbish damps etc exist in the vicinity.
- (4) The site is not congested

c. He will advise the board on any special requirement e.g. fly proofing arrangements, circulation of fresh air etc necessitated by local climatic conditions and environments.

d. He will examine the existing as well as likely sources of water supply and ensure that the water is free from organic impurities and fit for human consumption.

e. He will advise the board in correct siting of bath rooms, latrines and dhobi ghats etc.

f. He will advise the board on the location of medical facilities like MI room, child welfare centre etc, to ensure max benefits to all people.

g. He will advise the MES member in the layout of drainage, sewerage and sewage disposal arrangements and point out any hygienic aspect involved.

16. **Local Station Representative.** His duties will include the following:
- a. Carefully verify the users' requirements in close consultation with the user unit /formations.
 - b. Represent the users' point of view including preparation of users' requirements proforma in case specific representatives of the users are not available.
 - c. Furnish the master plan of the cantonment for reference and consultation of a board.
 - d. Apprise the board of the plans for hiring/ requisitioning civil accn, which should be kept in view while working out net additional requirements.
 - e. Advise the board in fitting the specific requirements of users in the overall master plan.
 - f. Advise the boards on grouping into areas and provision of pooled facilities.
 - g. Suggest reservation of space for parks, arboricultural schemes, playgrounds etc.
 - h. Assist the board in obtaining advice of the experts concerned, if required.
 - j. Cater for security aspects of the area.
 - k. Point out undesirable and unhealthy localities in the area.
 - l. Furnish any other information pertaining to local Station matters required by the board.

17. **Local Formation/AHQ Representative.** Their duties will include the followings:

- a. Furnish the master plan if not available with the local Station HQ.
- b. Cater for plans for future developments and expansion.

- c. Advise the board in siting the accommodation in conformity with the long term planning and with a view to ensure maximum flexibility in its utilization.
- d. Apprise the board of any special instructions, requirements and the latest policy laid down by AHQ.
- e. Provide tech and other data not available with the local/station representatives.
- f. Provide necessary guidance on correct orientation and relative positioning of buildings adequate spacing and prevention of over-crowding etc.
- g. Impress upon the board, particularly the users representatives, and the necessity of adhering to standard type plans as far as possible.
- h. Ensure that the board proceedings are clear and comprehensive in all respects to enable correct evaluation at AHQ for according approval and preparation of accurate estimates without unnecessary queries and back references.

18. **MEO Representative.** He will be responsible for furnishing the following information:

- a. A certificate that the affected land is Defence owned or can be acquired without any hitch. In case the land is to be acquired, he will clearly point out any foreseen hitch or likely delay in its acquisition and expected time required for procedural formalities for acquisition
- b. Detailed data and sketch of the affected and the adjoining land.
- c. If it is cantonment land, the class of land and whether it is on lease, hire etc. and period of lease/hire.
- d. Financial effect in case the land is to be acquired.
- e. Any other implication or useful information pertaining to the affected land.

19. **Submission of Board Proceedings.**

- a. The president of the board will ensure that the board proceedings are finalized as early as possible and submitted to the convening

authority before due date. The convening authority will specify in the convening order the date by which the proceedings are to be submitted by the president of the board and will ensure that the proceedings are not unnecessarily delayed either in preparation and submission by the president or in onward transmission to the higher authorities.

b. The necessity of finalization of the proceedings ASP cannot be overemphasized. The siting board will therefore work overtime to complete proceedings within minimum possible number of days. With a view to avoiding delay in submission, it will also be ensured that the President of the board and the members are not allowed to disperse till the proceedings have been signed by them

20. **Miscellaneous.**

a. Approved sites will NOT be changed as a matter of routine and without the approval of AHQ even if the proposed changes do not have any financial implications.

b. In case of faulty siting board proceedings, the President of the Board will be held personally responsible and called to explain in writing the reasons for non-compliance of these instructions.

21. **References.** The following will be consulted for preparation and submission of Key Plan Recce's and siting board proceedings:

a. SPAO-743/63.

b. SPAO- 885/59.

c. E in C's Routine Instruction No. 218/90

QUESTIONNAIRE OF USERS REQUIREMENTS

1. Name of Project
2. Location Station Area
3. Initiating authority
4. Name of Building
5. Functions/Purpose for which the accommodation is required
6. Personnel, vehicles and equipment to be accommodated
7. Number of rooms and their approximate sizes
8. Number of storeys preferred
9. Rooms required on each storey
10. Height of rooms required
11. Preferred aspect (Orientation) of any room
12. Preference for any particular material of construction
13. Special wall finishes required in any room
14. Special floor finishes required in any room
15. Rooms with any extra ventilation requirements
16. Any special joinery or special door & window fittings required
17. Type of room preferred
18. Rooms where ceiling is required
19. Type of electric wiring required
20. Rooms where fluorescent lights or power points are required with details of requirements

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21. Rooms where special electric fittings are to be installed with details of requirements
22. Is air conditioning required, if so to what temperature
23. Rooms requiring air filtration
24. Types of sanitary fittings including sinks and the positions where required
25. Is water born sewage required
26. Description of built-in fittings required with their position
27. Is sand proofing, dust proofing, fly proofing, mosquito proofing of any room required
28. Do any rooms require stepped or sloped floor
29. Are any special machine foundations to be provided
30. Is Gas, Vacuum, compressed air, steam refrigeration etc to be provided in any room
31. Rooms requiring air washing
32. Rooms requiring heating with any limitation on type of fuel
33. Position in which running hot or cold-piped water required
34. Is an electric lift required
35. Is compound wall or fence required around the site
36. Height of compound wall or fence desired
37. Type, extent & width of roads and paths required
38. Any other communication requirements both road and rail
39. Any special requirement not covered in serial no. 8 to 38 above

QUESTIONNAIRE FOR THE SITING BOARD

Project :
Station :
Formation :
Date :

The Estimate will be based on the consideration of the following data:

Ser	Question	Answer
1.	<u>B&R</u> Is the site available or has it to be acquired?	
2.	Has the site selected a scope for 100% expansion?	
3.	What is the topography of site hilly/flat/flood affected?	
4.	What is the type of soil at the site selected?	
5.	What is the maximum wind velocity to be expected?	
6.	What is the prevailing wind direction?	
7.	Is the area subject to cyclones etc?	
8.	What is the average annual and max intensity of rainfall of the locality?	
9.	What is the depth of water table in area?	
10.	What is the max Temperature during summer/winter?	
11.	How far is the site from the main road?	
12.	Has the site to be connected to the Main Road?	
13.	How far is the Rly Station from the site selected?	
14.	Is the Rly siding required?	
15.	What is the Seismic belt classification of site	
16.	<u>Site Clearance</u> a. Is demolition of existing buildings required? b. Other obstacles required to be removed.	

Ser	Question	Answer
17.	Are the proposed bldgs Single/Double/Multi Storied?	
18.	Is there any time limit imposed by the users for the completion of the work?	
19.	Are any special type of stores required, particularly imported items? If so, has the forecast been submitted?	
20.	Has the questionnaire of the users' proforma been filled in and attached as Annex 'A'?	
21.	Has the statement of accommodation to be provided been attached as Annex 'B'?	
22.	Has the contour site plan showing the layout of the bldgs with levels and roads etc. been attached as Annex 'C'?	
23.	Has the contour site plan showing the storm water katcha Nullah/Drainage system, been attached as Annex 'D' ?	
24.	Has the concrete surface drainage system been shown on the contour site plan for item 23?	
25.	Does any local sewage system exist nearby?	
26.	Has the contour site plan showing drainage system, sewage lines, and sewage disposal, been attached as Annex 'E'?	
27.	<p>Water Supply Does water supply system exist? If the answer is yes, give :-</p> <ol style="list-style-type: none"> Name of owner. Source with daily output. Can the existing source meet the additional requirement of water. If not, what potential sources are available to augment the existing sources? Give improvement reqd to the existing distribution system and the additional water mains. 	

Ser	Question	Answer
28.	Has the proposed and existing water supply been show on site plan and attached as Annex 'F'?	
29.	What machinery is required?	
30.	<p>Electric Supply</p> <p>a. Is the electric power available in the area? If the answer is yes, give:</p> <ul style="list-style-type: none"> (1) Name of owner. (2) Voltage. (3) AC or DC. (4) Can the existing supply scope with the additional load. If the answer is No, what improvement to the Sub Station and distribution system would be reqd to meet the additional requirement? <p>b. If the answer is No, to (a) above.</p> <ul style="list-style-type: none"> (1) How far electric power is available from the site. (2) Name of the owner. (3) Voltage. (4) AC or DC. (5) Can the existing sub/grid station of the supplying agency take the additional load. 	
31.	Has the proposed and existing electric supply been shown on site plan for item 28 above?	
32.	What machinery is required?	
33.	<p>General</p> <p>In the absence of type plan, have the line plans (foolscape size) for nontypical buildings been signed by users and attached as Annex 'G'?</p>	
34.	Have the general specifications for B&R works, BAFW-1841, been attached as Annex 'H'?	
35.	Is there any bldg which requires detailed drawing at estimate stage, if so, have these been attached as Annex 'J'?	

Ser	Question	Answer
36.	Is there any bldg which requires detailed quantities and prices, if so, have these been attached on BAFW-1842 & 1843 as Annex 'K'?	
37.	Have the general specifications, quantities & prices, BAFW-1844 for internal wiring been attached as Annex 'L' ?	
38.	Have the bldg line plans (foolscape size) of non-typical bldgs been attd as Annex 'M'?	
39.	Has the Schedule of Furniture, BAFW-1845 been attached as Annex 'N'?	

EXPENDITURE RETURN
MILITARY ENGINEER SERVICES

1. Monthly amendment to Master Copy for Expenditure Return for the month of _____
2. Name of Div _____
3. To be submitted to SFC (w) _____
4. Date of despatch – By 7th of the month.

Ser	Ref to Serial No. of Master Copy-BAFW-2251	Expenditure to end of month	Liabilities to end of month	Remarks
(a)	(b)	(c)	(d)	(e)

EXPENDITURE RETURN DETAIL
MILITARY ENGINEER SERVICES

1. Name of Div _____
2. Monthly Expenditure Return for Detailed Heads other than Major Works & Abnormal Repairs
3. To be submitted to Sta HQ SFO (w) & CsMES _____
4. Date of dispatch – By 7th of the month.

Note: Expenditure Return for June final, June supplementaries, June corrections will be submitted separately as and when necessary giving amounts to variations by causes.

Ser	Head of Account	Admin Approval Tech Sanction	Allotment up to date	Expenditure to end of month	Liability to end of month	Remarks
(a)	(b)	(c)	(d)	(e)	(f)	(g)

PROCEDURE FOR THE VALUATION OF BUILDINGS

1. **Estimate the value as follows.**
 - a. Record the measurements of the buildings in accordance with the standard method of measurement.
 - b. Abstract these measurements and price them on basis of MES Schedule of rates and specifications at current market rates, i.e. allow for the current contractors percentage on or off schedule rates. Where no rate is available as will often be the case, for the particular type of construction found, work out a special rate to meet the case.
 - c. Examine the walls, foundations, etc most carefully, by making holes, digging-trenches, etc to determine in what manner and to what extent the workmanship and specifications actually incorporated in the buildings differ from the specifications priced in paragraph 1 (b) above. Then estimate a fair percentage to compensate for work inferior to the specification adopted for pricing.

2. **Estimate the Life of Buildings as follows.**
 - a. The life of various buildings will be assumed as follow:
 - (1) First class or pukka buildings - 100 years
 - (2) 2nd class or pukka buildings - 75 years
 - (3) 3rd class or kucthha buildings - 30 years
 - b. Determine the actual age of the buildings from records, if available. Otherwise estimate the probable age.
 - c. Determine the present value of a sinking fund started at the date of construction and designed to amount to the value of the building (see paragraph 1 above) at the date of expiry of the life of the building. (Sinking fund tables in Hurst's Pocket Book will be used. A reasonable rate of interest prevailing at the date of construction will be adopted).

3. Estimate the cost of executing necessary repairs to bring the building to a reasonable state of repair in Appendix-1.

4. Evaluate items 1, 2, 3 above as in Appendix-2.

REASONABLE STATE OF REPAIR

1. A house is considered to be in a state of reasonable repair when it is in the following conditions.

- a. All floors, walls, pillars and arches (Including plaster, when applicable) are sound.
- b. All roofs are sound and weather proof and ceiling sound.
- c. All doors and windows are intact, properly painted or oiled, and provided with proper locks, bolts or other secure fastenings.
- d. Internal electrical installation (if any) is in good order properly fixed and with the insulation and fittings unimpaired.
- e. All water supply fittings (taps, etc.) are in good condition.
- f. All rooms, out-houses and other appurtenant buildings are properly colour-washed or whitewashed.

2. Abnormal Repairs - Building and Installation.

a. All renewals now termed as “Abnormal Repairs” and financed from maintenance Code Heads 4800. Since the new works procedure does not make any provision for affecting the capital cost of buildings or installations etc it has, therefore, been decided in consultation with the financial Authorities at the AHQ/NHQ/Air HQ that,

(1) B/R Renewals- amendments to the capital cost of buildings will be effected as laid down in para 148(6) MES Regulations .

(2) E/M Renewals-alterations to the capital cost of will be entered in the plant Record Book vide para 760 MES Regulations.

APPENDIX - 2 TO
ANNEX - D TO
R.I. - 201/2008

ABSTRACT OF VALUATION OF BUILDINGS AT NO

Ser	Item	Description of Buildings	Cost of erection to MES specification at current market rates. (Para 1 (b))	Amount to be deducted for inferior specification and workman ship. (Para 1(c))
(a)	(b)	(c)	(d)	(e)
		Total	Tk.	Tk.

Depreciation for age (Para 2)	Cost repairs (Para 3)	Resumption value (Column c less columns d and f)
(f)	(g)	(h)
Tk.	Tk.	Tk.

ROUTINE INSTRUCTION NO-202/2008
EXECUTION OF EXTERNAL SERVICE

1. It appears to be a universal practice with the MES executive authorities to leave the work of execution of external services to the very last. Instances have repeatedly come to notice where the work on external services has been commenced after the building construction has been almost completed. This invariably not only leads to delay in the completion of work as a whole but also spoil the finishing of the finished works.
2. The work of planning and execution of external services after the receipt of Administrative approval are generally entrusted to Cs MES/ GE/ AGEs who should have all the external services completed before the work on main building is completed.
3. Cs MES/GE/AGE`s will be held responsible in future if completion of external services occurs after completion of main building work.

This supersedes Routine Instruction no 202 of 1990.

CHAPTER –II

ROUTINE INSTRUCTION NO 203/2008
EXECUTION OF WORK AND CONTROL OF EXPENDITURE

1. **Execution of Work.**

a. Cases are still brought to light in which expenditure is incurred beyond permissible limit of the sanctioned amount of project works without prior approval of the sanctioning authority. For such cases, the Ministry of Finance requires explanations from the officers concerned and will not accept a mere 'regret' as the answer. All concerned down to the outstation AGEs will note this instruction carefully and restrict expenditure within the permissible limits. If any project does need revision, it should be put up well ahead of time so that an answer from the CFA may be received before the financial limit in expenditure is reached.

b. **There are Three Main Points to Watch.**

(1) Incurring of expenditure beyond the limit of the allotment is not permitted; except by special authority from Service HQ or the amount authorized in Para 67 MES Regulations.

(2) Permissible limit is the incurring of additional expenditure up to 10% of the Admin approval when completing a project provided additional allotment to make up the 10% excess over Admin approval have been obtained. When a project has been given revised admin approval, no excess is permitted over admin approval.

(3) When it is known, during the execution of a project, that the amount of admin approval is likely to be exceeded, for any reason, application should be made for revised administrative approval in order to regularize, before completion of the project.

c. The SDO will obtain the written authority of the GE/AGE before commencing any work when the normal procedure laid down in paragraph 514, Regulations for the MES, has not been completed, except when a requisition is passed by the SDO himself under his powers of technical sanction and bulk allotment has been placed at his disposal.

d. Major works and those minor works which are above the TC limit will under ordinary circumstances be carried out by Lump Sum Contracts. The uses of measurement contracts for these classes of work will be exceptions and will be governed vide provision of para 381 MES Regs. Maintenance will be carried out by the Measurement Contracts (the Term Contract) and direct labour.

e. All painting should normally be done under a special contract. A written record will be maintained showing the dates on which the various process, namely, scraping priming 1st coat, 2nd coat, etc. where passed by the Engineer-in-Charge. Should a contractor fail to obtain the written approval of the Engineer –in-Charge to one process before proceeding to the next, he must be required to repeat the former process.

f. Frequent samples of paint must be taken from the work and got tested by BSTI. Should these tests show adulteration, the entire building from where the samples were taken will be repainted.

g. Experience has shown that the employment of direct labour is uneconomical though it is convenient to employ in certain limited cases. The maximum number of daily labour that may be employed is embodied in the Term Contract. In completing the contract, CsMES will ensure that the amount permitted is reduced to the minimum.

2. **Financial Control.**

a. Normally all services carried out during any quarter of the year should be paid for in the following quarter in order that bills may be prepared and paid without a rush before the closing of the year. It follows that expenditure incurred during the last quarter should normally be paid in the quarter of the ensuing financial year and this is permissible under para 55, Regulation for the MES.

b. To enable the executive officer to exercise financial control over the expenditure of an allotment he has received, he maintains a construction account. Instructions for the maintenance of construction account are given in detail in R.I. No. 220.

c. At the end of the month, each folio of construction account will be closed. On the first working day of the following month the SDO will submit to the GE/AGE a summary of the total of expenditure and

the net liability on each folio, grouping them as shown in R.I No. 220. For this purpose, the same form will be used, the totals of each folio being shown on a separate line in the form. Using the same form the GE/AGE will summarise under each the various returns received from SDOs with a separate line for each SDO and will total each head. This summary will show the total amount expended and outstanding liabilities in the division and also the various classes of expenditure by which the grand totals have been reached, viz, labour, payment to contractors, materials, transport and credits.

d. Monthly expenditure returns (BAFW-2251). This will be prepared by the GE/AGE from the summaries referred to above and submitted to the DW&CE/CMES/SFC (W)/ Sta HQ not later than the seventh working day of the month. In this form will be entered the total of expenditure and liabilities under each minor head and will show the progress of expenditure in the division.

3. **Periodical Inspection of Barracks, Buildings etc (Half Yearly).**

a. Instructions for carrying out half yearly inspection are clearly defined in rule 505 Army Regs. All barracks, fixtures, furniture and E/M internal electric wiring of buildings are required to be inspected in detail. It is necessary that GE/AGE should personally commence such inspections for the guidance of their staff and see to what actually is required to be noted on the half-yearly inspection. Inspection notes of all these inspections are to be kept on properly bound books which should be signed by the MES and the unit representative to ensure that they both agree to any damages to the buildings, furniture, E/M etc. whichever are noted and the SDOs will submit the necessary barrack damage vouchers for acceptance to the units as early as possible after inspections.

b. Since a large numbers of temporary structures are on our books, it is very necessary that these structures are very carefully inspected specially by an officer to ensure that such structures are now not unsafe. There may be buildings which have an inherent defect which was overlooked at the time of designing the building e.g. absence of wind ties on Asbestos Cement/CGI Sheet, Pent Roof in an area subject to heavy wind storms. Such items should be noted for action.

Similarly the inspection of the internal electrification of building is to be carried out very carefully to check that it has not deteriorated to a considerable degree and that the internal wiring does not constitute grave fire risk. The repair programme is thus prepared by GEs/AGEs for periodical services, normal repairs and approved by Station Authorities.

4. **Register of Requisitions.**

a. There are two kinds of requisitions:

(1) Urgent requisitions (BAFW-1817). These are made out by the unit and submitted to the SDO as a demand for an urgent repair.

(2) Ordinary requisitions (BAFW-1833). These are demands by a unit for normal repairs that have been noted from time to time in the unit's repair book (Demand Register BAFW-1805). Such requisitions will only be prepared once in a month for each unit or each set of lines or group of building. On the occasion of half yearly inspection, the Requisition for that month will include repairs noted by the unit for the current monthly requisition as well as those noted by the MES on that inspection. BAFW-1833 are prepared by the SDO. This form is also used for repairs and minor works costing up to Tk. 50,000/-

5. **Urgent Requisitions.**

a. The form is initiated by the unit and experience shows that the general tendency is for the unit to misuse the form and to consider that every repair is urgent. It is therefore an important duty of the SDO to check these requisitions and to return to the unit any demand which is not urgent with the request that the repair may be noted in the repair book (BAFW-1805) for execution at the next half yearly inspection. In the event of disagreement with the unit, a report will be made to the GE/AGE

b. The SDO may then consider which of the remaining urgent repairs he will carry out by DEL and which will be ordered on the TC

Note:

1. Repairs other than those to water supplies, electric wiring, leaking roofs, sanitary systems, dangerous structures and cooking apparatus are not normally urgent.

subject to the conditions of clause 14 (e) of the Term Contract (BAFW-1821). Generally speaking, all works, including patch repairs to plaster and painting, will be ordered on the TC but small jobs which can be done more cheaply by DEL will be executed by that agency.

c. All requisitions to be carried out by DEL will be numbered and entered in the DEL Register of Requisitions as they are received. The form itself will be issued to the SAE /Overseer concerned as a work order and will show the work that is to be performed. On completion of the work, the details of labour, time and stores used will be entered on the back of the form which will be returned to the SDO as a record that the work is completed. The necessary entry in the "date of completion" column will then be completed in the register of requisition and the form will be filled.

d. It will be noted that all the information required for a check on the work performed by DEL is available on the back of the form. Such a check is of the greatest importance and a percentage of petty repairs should be checked regularly by the GE/AGE to ensure that work performed by DEL could not have been more economically performed by the T.C.

6. **Urgent Repairs Ordered on the T.C.** The procedure will be as detailed below for Ordinary Requisitions ordered on the T.C. except that the order slip and detail of work to be done will be sent immediately to the contractor, and the cost reported to the GE/AGE as soon as possible for entry on BAFW-1817.

7. **Ordinary Requisitions (BAFW-1833) Ordered on the T.C.**

a. Works on repairs to be executed on requisitions (BAFW-1833) will be detailed, ordered and measured for building in accordance with the followings:

- (1) The item or items of work or repairs to be carried out are entered on BAFW-1833.
- (2) These are detailed on BAFW-2158 (which provides for two carbon copies) except as regards cost, which is entered in pencil on the original only.
- (3) The approximate cost arrived at is entered against each item on BAFW-1833 and the total of all items recorded.

(4) GE/AGE sanctions and allots funds. U.A. verifies and SDO enters in Construction Account.

(5) One copy of the detail on BAFW-2158 with order slip BAFW-1823-A is sent to the contractor for execution of work.

(6) When the work is completed, the measurements on BAFW-2158 are checked and revised where necessary and the amount column completed.

(7) One copy of BAFW-2158 thus revised and completed is attached to the requisition (BAFW-1833). The remaining copy of BAFW-2158 is kept for record purposes for 5 years by the GE/AGE.

(8) Work carried out by Departmental Labour will be detailed on last page of BAFW-1833 as therefore.

(9) Necessary entries will be made in the Register of Requisition.

b. It is of the utmost importance that work should be paid for as soon as possible after it has been completed. It is therefore an important duty of the SDO and the GE/AGE to keep a regular watch on the Register of Requisitions to see that items are not overlooked. The discovery of long outstanding items is a definite sign of inefficiency on the part of the supervisory staff.

8. **Other Works or Repairs Ordered on the T.C.** Detail of the work to be done with dimensioned hand sketches, if necessary, will be given on BAFW-1823 which is an order form for work to be done by a contractor. Where a detailed Estimate (BAFW-1793, 1796) or detailed drawings and specification have already been prepared, BAFW-1823 is unnecessary but a copy of the documents will accompany an order slip on BAFW-1823-A. The work will be measured up, abstracted and billed as laid down in paras 403-407 MES Regulations.

9. **Completion Certificate on BAFW-1833.**

a. BAFW-1833 is a requisition used by MES in connection with petty repairs, minor works or renewals. When the work listed on the requisition has been completed, MES are responsible for obtaining the signature of the OC Unit or officer concerned on the Completion Certificate on the back of the form.

- b. The signature on the Completion Certificate only implies that the work has been done. It does NOT relieve the MES officers of their technical of other responsibilities in any way.
- c. All measurements will be completed and entered deviations recorded and the requisition will be prepared and GE's/AGE's percentage check of measurement will be carried out before BAFW-1833 is forwarded to the unit or officer concerned for signing the Completion Certificate. Normally the Requisition should be presented for signature on the Completion Certificate within a week of the date of completion of the work, but if such measurement work is involved, this period may be extended to a fortnight or even 3 weeks.
- d. The SDO at the time of completing (a), (b), (c), (d) and (e) on the back page of BAFW-1833 will add the completion cost in Taka after the words "Completion Certificate" at the foot of the last page. This will be done to ensure that the officer who signs the Completion Certificate knows how much the work has cost. The cost of the work can not be altered by the executive after the Completion Certificate has been signed, unless a fresh BAFW-1833 is prepared.
- e. In the case of work carried out in lines etc. the Completion Certificate will be signed by the Commanding Officer of the Unit. In the case of Govt. owned bungalows, the Completion Certificate will be signed by the occupant, that is to say the officer or other person to whom the bungalow has been allotted and who is paying rent of it. In the case of hired or requisitioned bungalows BAFW-1833 will be sent to the MEO concerned.
- f. The MEO should obtain the signature of the occupant of the bungalow on the Completion Certificate and will then himself countersign the Completion Certificate. Particular attention will be paid to this instruction and no substitute signature of other persons on Completion Certificate will be either demanded or accepted by the MES executive. The officer who signs the Completion Certificate will add his name in BLOCK LETTERS below his signature.
- g. No alteration of BAFW-1833 will be made by the MES executive after the Completion Certificate has been signed. Should it be found necessary for some reasons for the MES executive to make alteration to BAFW-1833 after the Completion Certificate has been signed, then a fresh BAFW-1833 will be prepared and submitted for fresh

signature of the Completion Certificate. The original BAFW-1833 will have "CANCELLED" written across the back page by MES executive and will be attached to the fresh Completion Certificate can compare the two forms.

10. **Supply of Stores.**

a. Insistence on the principle that a contractor should supply all stores wherever possible will result in savings in money, time and labour on the part of the GE/AGE and his staff. This principle will therefore invariably be followed.

b. The issue of materials to contractors under the conditions of their agreements is permissible, solely for the bonafide requirements of Government works. SDOs should therefore take necessary steps to ensure that the total issues to a contractor in connection with a particular work are limited to the reasonable needs of that work. This precaution is particularly necessary when the rates at which any materials are issued are lower than the prevailing; the market rates of the latter are expected to rise appreciably. There are certain well defined exceptions to this principle. viz

(1) Stores which are purchased from abroad.

(2) Stores which the Government is in a position to buy at cheaper rates owing to the large amount of stores required. Running contracts usually exist for such articles.

(3) Special articles required for a particular purpose.

(4) Stores required for use with direct employed labour.

c. The supply to a contractor of articles which are obtained locally by the GE/AGE can never be justified. The contractor must be made to arrange his own supply and their responsibility is therefore limited to the inspection of quality of the stores supplied and incorporated in the work.

d. The stock held should be as low as possible. The fact that work is in hand necessitating the supply of stores on running contracts is no justification for holding a large stock. Whenever possible stores required for work should be brought and issued direct to the work issue from stock being limited to cases where it is more economical.

11. **Deviations.** With reference to para 340 (i) of Regulations for the MES it is essential that similar orders must also given to adjust any errors that may have been made in the preparation of BQ to facilitate the audit of accounts, each deviation order should be given descriptive heading such as “Deviation through changed policy”. Deviation through changed design”, Deviation through omission in Quantities”, or similar suitable heading.

12. **Submission of Completion Reports Part ‘A’ & Part ‘B’.**

a. Under the existing procedure, completion reports both Part A and Part B are required to be submitted by GEs/AGEs to higher Engineer Authorities, through their respective Unit Accountants. Since this system tends to delay the submission of Completion Reports without serving any useful purpose, it has been decided that completion reports Part-A will be submitted direct by Engineer Authorities without obtaining initials of their Unit Accountants.

b. If abnormal repairs involve a change in the categorization or classification the capital values of the buildings will be amended in accordance with paras 29 (i) and 148 (b) (i) MES Regulations. The completion reports Part A and B in such cases will be submitted as usual.

c. In other cases of Abnormal repairs the completion reports are not required. Completion reports Part-B will continue to be submitted through the UA as this represents financial completion of the work.

This supersedes Routine Instruction no 219 of 1990.

ROUTINE INSTRUCTION NO 204/2008
CONSTRUCTION ACCOUNTS

1. **Object.** The object of maintenance of the Construction Accounts is to enable an Engineer Executive to see that funds for engineer service under his control are administrated efficiently and economically with a view to ensure that:
 - a. The total estimate of each service is not exceeded beyond permissible limits.
 - b. No expenditure or liability is incurred until funds to meet it are available.
 - c. The funds are expended on those duly authorized services for which allotted and on no others.
 - d. Excess or saving in expenditure against funds allotted does not exceed Tk. 1000/- or 5% of the allotment which ever is less.
 - e. Expenditure and liabilities on an individual item of building or service is readily available so that if revision of the sanction is necessary a revised estimate can be accurately and readily prepared.
 - f. When a project is physically completed and its accounts finalized completion costs of each individual building or service is readily available for entries in the Register of Buildings.

2. **Definitions.** Before the method of maintenance of Construction Accounts is detailed it is essential to have an intelligent understanding of the various terms used in connection therewith.
 - a. **Administrative Sanction.** Administrative Sanction is a sanction of the CFA to the execution of a work at a stated cost.
 - b. **Allotments.** When Administrative Sanction for a service has been issued, the competent Financial Authority (CFA) provides funds under the budget head concerned in a financial year and these funds are intended to cover all charges (including the liabilities of the past years to be paid and adjusted during the years Lump sum allotments are made for standing charges i.e. maintenance of buildings, furniture etc) based on the authorized percentages.

c. **Liability.** An order given for the execution of a work or provision of store constitutes a liability until the order is completed and paid for. It is an approximate figure but should be as accurate as possible and should be revised if and when any variation becomes known.

d. **Expenditure.** The amount that has been expended is a definite figure such as.

- (1) Bills that have been paid.
- (2) Stores that have been issued from stock.
- (3) Accepted book debits, such as interdepartmental transfers for stores and services rendered.

e. **Less Any Credits that are Received.** It is not necessary to have an expenditure entry corresponding to liability entry. For example, one bill made up of a number of completed requisitions forms one entry in the expenditure column when paid although it cancels a number of liability entries.

f. **Construction Account Folio.**

- (1) Cover BAFW-2242-B indicating instructions (Attached as Appendix "C").
- (2) Abstract. BAFW-2242-C (attached as Appendix "D").
- (3) Construction Account Outer sheet BAFW-2242 (Attached as Appendix "E").
- (4) Construction Account Inner Sheet-BAFW-2242-A (Included in Appendix "F"). The account of all liabilities and expenditure is booked in these forms.

g. **Reconciliation.** All the expenditure as incurred and allocated by the SDO is compiled by the Unit Accountant and classified to the relevant head of account in Punching Media. At the end of the month the figures of the Construction Accounts and the Punching Media are compared and discrepancies, if any, are reconciled.

3. **Rules for the Maintenance of Construction Account.** These are given in Appendix "L" of MES Regulation. These rules must be carefully read and observed by each subordinate and officer connected with the maintenance and verification of the Construction Account. The points that need particular emphasis are stated below:

- a. On receipt of Admin Sanction for every new work and sanction to abnormal repair, the GE/AGE must decide and give orders in writing about the number of folios that must be opened for each work and by whom each will be maintained. He will also decide and order as to who will maintain the consolidated account for the whole job and to whom the others will render their respective abstracts in case the project is being handled in parts by more than one SDO.
- b. With regard to maintenance GEs/AGEs receive lump sum allotments. These are distributed to their SDOs who will open separate folios for allotments given to them under respective code head.
- c. Rules require the opening of separate folios for each major item of a work, separate contract, or work done by DEL. This will invariably be done.
- d. If a Material-at-Site Account has been sanctioned for a Major work, a separate folio will be opened for it. All charges on account of materials received will be debited to this folio, Materials issued to items of the project will be debited to the items concerned and corresponding credit afforded to the Material-at-Site Account folio.
- e. Instruction given on cover BAFW-2242-B will be carefully noted and followed in every case. Appropriate entries will be made on the various construction account forms as elaborated mentioned in para-7 below.
- f. All entries will be in very legible hand writing.
- g. GEs/AGEs must make it a rule to check his SDOs Construction Accounts as often as possible and in no case less than once in three months.

4. **Responsibility for the Maintenance of Construction Account.** As funds are placed at the disposal of the SDO I/C of a Sub Division and as he is responsible to administer these funds efficiently and economically, he is responsible to keep an accurate account of the same. The actual

recording of the entries may be done by the Sub-Divisional Clerk but these should be initialled personally by the SDO.

5. **Number of Construction Account Folios to be opened.** An example of the number of construction account folios that may have to be opened for a major Project, based on certain assumptions, is shown in Annex - B.

6. **Preliminary Planning by SDO.** Having been ordered by the GE/AGE to open a construction account folio for any new work or maintenance, the SDO must obtain a copy of the Project Estimate or in case of a project being handled by more than one SDO an extract of the portion of the work entrusted to him. He will study this carefully and make out a tentative plan for the execution of the various items of the work and their anticipated cost of completion. It is a good practice to plan the expenditure on a sheet of paper in full details and keep it in the Construction Account. It should be referred to when orders are placed. This will not only avoid missing of some essential items of the sanctioned estimate but will, also ensure even and steady commitments. To illustrate how expenditure on a work should be planned, a sample sheet for a minor work is attached as Annex - A.

7. **Method of Making Entries in the Construction Account Folio.**

Specimen entries in the construction folios for a minor work sanctioned for Tk. 6,990/- and planned for in the preceding paragraph are shown in Appendices 'E' & 'F'. The method of making entries in various columns is explained below:

- a. Front page or outer sheet BAFW-2242 is self explanatory and entries will be made immediately as occasion arises.
- b. **Column 1.** fill in items No. serially.
- c. **Column 2.** Each serial entry of liability item should be cross linked with the expenditure item and vice versa by filling in back and forward references.
- d. **Column 4 to 12.** Columns 4 to 12 are self explanatory. Particulars to be filled in column 4 MUST show the brief nature of the voucher or the transaction. Column 8 refers to materials supplied by the MES Stock or purchases chargeable direct to work. Credits for materials

returned to stock or sold will be shown as minus transactions. Column 10 refers to all expenditure not covered by any of the other columns. In column 11 will be entered any bonafide credit e.g. credits from other departments of the Government in case of E&M Installations, sale proceeds of material realized from demolition etc.

e. **Column 13 to 14.** Any commitment made which eventually results in expenditure constitutes a liability and must be immediately entered in these columns, Generally speaking the following will be entered as a liability under these columns:-

- (1) An order on a contractor to execute a work for an estimated amount.
- (2) An indent on Div Stock/Central Stock for issue of stores to & contractor or for the Store-in-Hand Ledger or for work by DEL.

Notes:

1. In case of stores indented for issue to contractor against a Work Order Approx.; Liability will be shown in column 14 with a simultaneous entry in column 16 showing the credit expected from the contractor at Schedule "B" Rates. The amount thus shown in column 16 will also be shown in col 19 as charges against the contractor so that recovery in respect of any USR is not lost sight of when expenditure is booked in respect of such an indent its liability will be cancelled with out any entry in column 19.
 2. If stores are indented on the Central/Div Stock for the DEL of the Store-in-Hand Ledger their approx cost will be entered as liability in column 14 and added to the running total of liabilities in column 17.
 3. An order for stores other than indent on MAS Account for the project plus approx. freight and handling charge.
 4. Transport Indent for transport and requisition/order for T&P required.
 5. Obligatory charge for DEL and estimated cost of stores to be issued to DEL.
 6. Estimate cost of services ordered on other Departments.
- f. Columns 15 & 16-Every Liability is cancelled in due course by completion of the order and the entry of the actual expenditure. It is not necessary to have an expenditure entry corresponding to each

liability entry. An Expenditure item may be more or less but the amount to be entered in column 16 will be the full amount of the liability as originally booked if the corresponding expenditure is final and no more expenditure is anticipated. A single liability entry may as well be cancelled by a number of expenditure items as and when these are incurred and also a single item of combined expenditure may cancel a number of liabilities. Liabilities items in column 14 when cancelled by corresponding expenditure entry will be underlined in red pencil to show that these have been cancelled.

g. **Column 17.** Column 17 shows the net total of liabilities outstanding. Care must be taken to see that this is cross checked by adding total of columns 14 and 16 during the month to the amount of liabilities shown at the end of the last month.

h. **Column 18.** Column 18 the running totals of column 12 (expenditure) are added to the running total of net liabilities outstanding in column 17 to give the aggregate expenditure and liabilities of column 18. If the expenditure amount is the same as of the liability cancelled no change is to be made, only the difference if any is to be adjusted.

j. **Column 19.** Column 19 shows charges against contractor such as:

- (1) Cost of stores issued on payment for incorporation in the works at the rates shown in Schedule "B" of the Contract Agreement. This cost may vary from the cost shown in column 8.
- (2) T & P hired.
- (3) Payment made on Running Account Receipt.
- (4) Secured advances.
- (5) Water Charges.
- (6) Extra expenditure incurred at risk and cost of the contractor.
- (7) Compensation for delay.
- (8) Any other charge against the contractor including money due from him on any other contract etc.

If this column is correctly filled and on its basis all charges are recovered before any payment on account is made, final bills will never be minus.

k. Column 20 when final bill is paid all charges recovered from the contractor must be exhibited in this column.

l. At the end of each month a double line will be drawn below columns 6 to 11 and below columns 14 and 16 and between these lines the totals for the month will be entered in red ink.

8. **General.**

a. The practice of copying the Punching Media figures in the Construction Accounts is the root cause of all incorrect financial control and must not be resorted to.

b. A Construction Account maintained up-to date rarely tallies hundred percent with Punching Media as on account of time lag and other factors some vouchers recorded by the SDO are liable to be omitted by the U.A. and therefore each SDO and UA have to get together to make to agree by necessary corrections etc where needed.

c. All vouchers requiring adjustment during the month which have been posted in the Construction Account MUST be delivered to the UA by 25th of the month (30th in the case of June) so that by the end of the month he is able to include these in the Punching Media. To avoid rush at the Unit Account's Office, vouchers should be posted regularly during the month and forwarded to the UA immediately after posting in the Construction Account. These are NOT to be kept repeat not to be kept by the Sub Division unit the last date.

d. The UA prepares the Punching Media from the vouchers receives. For this purpose Cash Book with vouchers complete in all respects will also be handed over to the UA on the 25 of the month (30th in case of June) so that he has all the vouchers to be included in the Punching Media and is fully ready for reconciliation of the Construction Accounts between first to fifth of the next month before the Punching Media is finally closed on 5th for submission to CGDF Hollered Section for Punching.

e. For reconciliation from first to fifth the GE/AGE will fix in consultation with the UA suitable dates and time for different Sub Divisions. Any wrong adjustment carried out in the Construction Account or in the Punching Media will be set right.

This supersedes Routine Instruction no 220 of 1990.

EXAMPLE-1**PRELIMINARY PLANNING****Minor Works-Provision of A Sanitary Annexe in Station HQ Rangpur**

Ser	Description of works	Amount in Tk.
1.	Amount of Administrative Sanction	6,990.00
2.	<u>Proposed Expenditure</u>	
	a. Contract amount for	
	(1) Building	
	(2) Soakage pit & Septic Tank	
	(3) Effluent drains and manholes	
	(4) Fixing only of sanitary fittings	6,230.00
	b. Cost of sanitary fittings to be arranged departmentally	
	c. Water supply connection including overhead tank	
	d. Electrification	100.00
	Total expected expenditure	6,330.00
	Saving anticipated	660.00

Note:

1. At the preliminary stage, the planning is well in hand and a sum of Tk. 660/- can be kept in reserve for unforeseen expenses. However, as soon as liabilities become definite, the position should be reviewed and if any excesses above Tk. 660/- are liable to occur, the CFA should be immediately informed giving reason for excesses.

EXAMPLE-2**ABSTRACT OF COST**
CONSTRUCTION OF A VEHICLE SHADE AT RANGPUR

Ser	Item of Work	Amount in Tk.
1.	Site Clearance	5,000/-
2.	Construction of 20 Vehicle Shade	31,70,000/-
3.	Provision of	
	(a) Administrative Block including internal services	1,40,000/-
	(b) Reception Office including internal services	10,000/-
4.	Fencing and Gates	35,000/-
5.	External Services	
	a. Electric Supply	3,00,000/-
	b. Water supply	2,50,000/-
	c. Sewage Disposal	10,000/-
	d. Roads & Culverts	2,00,000/-
6.	Furniture	25,000/-
	Total	41,45,000/-
7.	Add 5% contingencies (Except item no.6)	2,07,250/-
8.	Add 2% Establishment Charge („)	82,900/-
	Grand Total Tk.	44,35,150/-
	Say Tk.	44,35,000/-

Assume that after the receipt of Admin sanction the work shown in the abstract of cost has been decided to be done in the following manner:

- Item No.1 - By DEL with Machinery by GE.
- Item No.2 - By contract in two groups of A and B by DW&CE including internal electric & water supply.

RESTRICTED

- Item No.3(a) - By one contract by CMES including internal services
and 5(c) and sewage disposal.
- Item No.3(b)
and 4 - By one contract by GE.
- Item No.5(d) - By two contracts one for earthwork by GE and
other by CMES for roads and culverts.
- Item No.5(a) - Partly contract by CMES and partly by DEL.
- Item No.5(b) - By DEL.
- Item No.6 - By contract by GE.

COVER FOR BANGLADESH ARMY FORM W-2242
CONSTRUCTION ACCOUNT (MILITARY ENGINEER SERVICES)
(See para, 510, Regulation for the MES)
INSTRUCTIONS

1. The responsibilities regarding completion check and verification of the Constructions Account will be as follow :-

- | S. D. O | GE/AGE | U. A | |
|---|--|--|--|
| a. He will see that all the charges against contractor are recovered and no voucher/indent is left unaccounted for. | a. He will endorse a certificate under his dated signatures that he has checked the Construction Account up-to-date. This is required at least once in every 3 months for the first 9 months of the year and every month in the last 3 months. | a. He will check 100% entries of the Construction Account with the supporting documents and will bring to the notice of GE/AGE | 6. When a work is carried over from one year to another, the expenditure to end of last year as well as the total of the charges against a contractor will be extracted from the accounts for the previous year and entered on the top of the construction account folio for the new year. |
| b. He will carefully watch the incurring and cancellation of liabilities to avoid lapses and excesses on the service. | | b. Any lapses/excesses.
c. Charges against contractors not realized.
d. Overpayments made to contractor. | 7. Serial Item no. of the construction Account will be shown on each supporting document which will be stitched serially month-wise |
| | | e. He will see that stamped certificate is affixed on all vouchers by SDO. | |

2. B. A. F. W-2242 will be used as the loose leaf Construction Account for Engineer Service. Only legible entries will be made.
3. B. A. Fs. W-2242 will be inserted in this binder and will be entered on the serial list. They will be grouped in the order, as regards sub-heads, in which they appear in the Defence Services Budget and App. G of the regulations for the M.E.S irrespective of the serial numbers allotted. or in separate covers for each sub-head at the discretion of G.E. In the former case serial numbers on folios will be preceded by A.B.C. etc according to the Main Budget sub-head to which the service or item belongs. The SI. Nos. of Construction Accounts will be invariably endorsed on vouchers which must be kept in a book or guard file serially arranged.
4. Expenditure will be recoded on B.A.F.W-2242 in the appropriate column or columns the aggregate total expenditure to date being shown in column 12.
5. Any corrections to previous overcharges or undercharges will be made as fresh minus or plus transactions respectively as soon as the mistake is discovered. and cross references between the original entry and the correction will be made in the remarks column.
8. The Construction Account will only be treated as complete when all the forms are included in the cover FAFW-2242B and BAFW-2242C
9. a. The T&P and other stores issued to contractor on loan or hire will also be entered on the U.S.A. Rs
b. This is also necessary when T&P and surplus stores are returned by the Contractor.
10. SDI responsible to maintain Construction Accounts will use a rubber stamp made as follows for all vouchers:-

Entered in Constn Acct.....
vide item No.....page.....
S.D.O & U.A.....
(Name in Block Letter).....

This will be initialed by the S. D. O & U. A
Invariably

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CONSTRUCTION ACCOUNT ABSTRACT
(MILITARY ENGINEER SERVICES)
(See Para 512, Regulations for the M.E.S)

Sub-Head : A-works Minor Head (a) Army works

Service : Provision of a Sanitary Annex in Sta HQ Rangpur

204C-3

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A B S T R A C T

Construction Account Folio No.	Name of Sub-work, Minor work, Renewals or Minor Head of Maintenance of other standing charges.	Amount of Administrative approval	Reference to Technical Sanction	Expenditure to end of previous year	Expenditure for the year, liabilities and allotments to end of Jul '89			
					Expenditure	Liabilities	Total	Allotments
1	Provision of a Sanitary Annex in Sta HQ Rangpur	Tk 80,000.00	Tk 80,000.00	Tk Nil	Tk -	Tk -	Tk -	Tk -

June '89

Expenditure	Liabilities	Total	Allotments
Tk	Tk	Tk	Tk
32,070.00	48,470.00	80,540.00	80,000.00

SDO

UA

July '90

Expenditure	Liabilities	Total	Allotments
Tk	Tk	Tk	Tk
79810.00	-	79,810.00	79,810.00

SDO

UA

CONSTRUCTION ACCOUNT (MILITARY ENGINEER SERVICES)

Approved Estimate Tk. 80,000.00 Authority HQ Div No. 675/2/Q-1 dt. 15-8-89
 Revised Estimate Tk. , ,
 ,, Tk. , ,
 ,, Tk. , ,
 ,, Tk. , ,
 Technical Sanction Tk. 80,000.00 , ,

ALLOTMENTS

G. E. No	Date	Amount Tk.	Total Tk.
<u>5006/92/E5</u>	<u>5-9-89</u>	<u>80,000.00</u>	<u>80,000.00</u>
,, <u>5006/92/e5</u>	,, <u>15-1-90</u>	Tk. <u>(-)190.00</u>	,, Tk. <u>79,810.00</u>
,, _____	,, _____	Tk. _____	,, Tk. _____
,, _____	,, _____	Tk. _____	,, Tk. _____
,, _____	,, _____	Tk. _____	,, Tk. _____

CONTRACT

Amount 70,700.00 Period 3 months Agreement no GER/07 of 89-90
 Name of Contractor M/s ABC

Expenditure incurred to end of last year, in the case of works in progress. Tk. Nil

Item 572/00
 Sub Head A Works, Minor Head (b) Minor works.
 Service Provision of a sanitary annexe in Station HQ Rangpur
 Code No _____

Detail of cheets inserted in folio :-

1. Date 5-9-89 Initial
2. ,, 10-9-89 ,,
3. ,, 8-1-90 ,,
4. ,, _____ ,,
5. ,, _____ ,,
6. ,, _____ ,,
7. ,, _____ ,,
8. ,, _____ ,,
9. ,, _____ ,,
10. ,, _____ ,,

Note:- The S. D. O. will initial and date each sheet inserted in this folio. If for any reason a sheet is subsequently withdrawn, date of withdrawal and the reasons for and particulars of disposal will be entered by the S. D. O and initialled.

RESTRICTED

BOOKED EXPENDITURE																		
Item No.	Reference		Date	Particular	Voucher		Labour		Payment to Contractor		Materials		Transport		Other Charges		Credits	
	Back	Forward			No.	Date	Tk.	Ps.	Tk.	Ps.	Tk.	Ps.	Tk.	Ps.	Tk.	Ps.	Tk.	Ps.
1	2		3	4	5		6		7		8		9		10		11	
1.	3,7,9 & 10		5-9	SEPTEMBER-89 W.O on Contr. W.O. No 1 of 5. 9.89			-		-		-		-		-		-	
2.		8	20/9	Stores demand on GE for 1 WC & 2 urinals etc.			-		-		-		-		-		-	
3.	1	6	25/9	Indent on stock for stores.			-		-		-		-		-		-	
OCTOBER-89																		
4.		12	5/10	Order placed on SDO E/M for electrification.			-		-		-		-		-		-	
5.		11	10/10	Order on SDO W/S for water connection.			-		-		-		-		-		-	
6.	3		12/10	Stores from stock.	567012	25/9	-		-		1780.00		-		-		-	
7.	1		25/10	RAR paid to contractor.	54/1012	22/10	-		22,000.00				-					
									22,000.00		1780.00							
NOVEMBER-89																		
8.	2	13	6/11	Received Liability of stores of local purchase.			-		-		-		-		-		-	
9.	1	10&14	20/11	D. O. for extra drain and manhole.			-		-		-		-		-		-	

Running Totals	LIABILITIES AND EXPECTED CREDIT						Booked Expenditure & Liabilities (Col 12 & 17) running total	ONTRACTORS ACCOUNT				Remarks
	Liabilities incurred or credits cancelled		Liabilities cancelled or credits expected		Net liabilities outstanding running total			Charges against	Recoveries from	Running total	Initials	
12	13	14	15	16	17	18	19	20	21	22	23	
Tk. Ps.	Tk. Ps.	Tk. Ps.	Tk. Ps.	Tk. Ps.	Tk. Ps.	Tk. Ps.	Tk. Ps.	Tk. Ps.	Tk. Ps.	Tk. Ps.		
-	W. O. No. 1	70,700.00	-	-	70,000.00	70,700.00	-	-	-		Reconciled 9/89	
-	GE No3615/15/ E-3 of 22.9.89	2,450.00	-	-	73,150.00	73,150.00	-	-	-			
-	567012 of 25/9	1,780.00	USAR No 58455 of 25/9	1,700.00	73,230.00	73,230.00	1,700/-	-	1,700/-		UA	
		74,930.00		1,700.00								
-		3,100.00	-	-	76,330.00	76,330.00	-	-	1,700.00		Reconciled 10/89	
-		2,350.00	-	-	78,680.00	78,680.00	-	-	1,700.00			
1,780/-		-	-	1,780.00	76,900.00	78,680.00	-	-	1,700.00			
23,780/-		-	54/1012 of 22/10	22,000.00	54,900.00	78,680.00	22,000/-	-	23,700.00		UA	
		5,450.00		23,780.00								
23,780/-		2,590.00	-	2,450.00	55,040.00	78,820.00	-	-	23,700.00		Necessity of this storages as the supply was not received against S/No.2	
23,780/-		2,170.00	-	-	57,210.00	80,990.00	-	-	23,700.00		Necessitating fresh quotation Reconciled 11/89	
		4,170.00		2,450.00							UA	

BOOKED EXPENDITURE																		
Item No.	Reference		Date	Particular	Voucher		Labour		Payment to Contractor		Materials		Transport		Other Charges		Credits	
	Back	Forward			No.	Date	Tk.	Ps.	Tk.	Ps.	Tk.	Ps.	Tk.	Ps.	Tk.	Ps.	Tk.	Ps.
1	2		3	4	5		6		7		8		9		10		11	
				DECEMBER-89														
10.	1& 9	14	8/12	Revised liability for final bill	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11.	5		19/12	Debit from SDOP W. S	52/0012	18.12.89	-	-	-	-	-	-	-	-	2570/-	-	-	
12.	4		20/12	Debit from SDO E/M	53/1017	17.12.89	-	-	-	-	-	-	-	-	3130/-	-	-	
13.	8		24/12	Bill for the sanitary fittings.	54/1121	22.12.89					2590/-	-	-	-	-	-	-	
											2590/-	-	-	-	5700/-	-	-	
				JANUARY-90														
14.	10		16/1	Final bill of contr paid.	54/1123	25.11.89	-	-	48,000/-	-	-	-	-	-	-	-	470/-	
15.			20/1	Adjustment yr on revision of S. B rates.	54/1260	18.1.90	-	-	-	-	-	-	-	-	120/-	-	-	
16.			25/1	Debit yr on account of pay of labour.	54/1340	15.1.90	90.00	-	-	-	-	-	-	-	-	-	-	
							90.00	-	48,000/-	-	-	-	-	-	120/-	-	470/-	

Running Totals	LIABILITIES AND EXPECTED CREDIT						Booked Expenditure & Liabilities (Col 12 & 17) running total	CONTRACTORS ACCOUNT				Remarks
	Liabilities incurred or credits cancelled		Liabilities cancelled or credits expected		Net liabilities outstanding running total			Charges against	Recoveries from	Running total	Initials	
12	13	14	15	16	17	18	19	20	21	22	23	
Tk. Ps.	Tk. Ps.	Tk. Ps.	Tk. Ps.	Tk. Ps.	Tk. Ps.	Tk. Ps.	Tk. Ps.	Tk. Ps.	Tk. Ps.	Tk. Ps.		
23,780.00	257/N	70,000.00	-	70,700.00	56,510.00	80,290.00	-	-	23,700/-		Reconciled 12/89	
26,350.00	-	-	-	2,350.00	54,160.00	80,510.00	-	-	23,700/-			
29,480.00	-	-	-	3,100.00	51,060.00	80,540.00	-	-	23,700/-			
32,070.00	-	-	-	2,590.00	48,470.00	80,540.00	-	-	23,700/-		UA	
		70,000.00		78,740.00								
79,600.00	-	-	-	48,740.00	-	79,600.00	470/-*	24,170/-	-		*Difference in cost between market and Sch B rates of the store not returned by contr.	
79,720.00	-	-	-	-	-	79,720.00	-	-	-			
79,810.00	-	-	-	-	-	79,810.00	-	-	-			
		-		48,740.00							Reconciled 1/90	
											UA	

**COVER FOR BANGLADESH ARMY FORM W-2242
CONSTRUCTION ACCOUNT (MILITARY ENGINEER SERVICES)
(See para, 510, Regulation for the MES)**

INSTRUCTIONS

1. The responsibilities regarding completion check and verification of the Constructions Account will be as follow :-

- | S. D. O | GE/AGE | U. A |
|---|--|--|
| a. He will see that all the charges against contractor are recovered and no voucher/indent is left unaccounted for. | a. He will endorse a certificate under his dated signatures that he has checked the Construction Account up-to-date. This is required at least once in every 3 months for the first 9 months of the year and every month in the last 3 months. | a, He will check 100% entries of the Construction Account with the supporting documents and will bring to the notice of GE/AGE |
| b. He will carefully watch the incurring and cancellation of liabilities to avoid lapses and excesses on the service. | | b. Any lapses/excesses. |
| (a) | | c. Charges against contractors not realized. |
| | | d. Overpayments made to contractor. |
| | | e. He will see that stamped certificate is affixed on all vouchers by SDO. |

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They will be grouped in the order, as regar5ds sub-heads, in which they appear in the Defence Services Budget and App. G of the regulations for the M.E.S irrespective of the serial numbers allotted. or in separate covers for each sub-head at the discretion of G.E. In the former case serial numbers on folios will be preceded by A.B.C. etc according to the Main Budget sub-head to which the service or item belongs.

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- 7.
8. The Construction Account will only be treated as complete when all the forms are included in the cover FAFW-2242B and BAFW-2242C
9. a. The T&P and other stores issued to contractor on loan or hire will also be entered on the U.S.A. Rs
b. This is also necessary when T&P and surplus stores are returned by the Contractor.
10. SDI responsible to maintain Construc-tion Accounts will use a rubber stamp made as follows for all vouchers:-

Entered in Constn Acct.....
vide item No.....page.....
S.D.O & U.A.....
(Name in Block Letter).....

This will be initialed by the S. D. O & U. A Invariably

CHAPTER – III

ROUTINE INSTRUCTION NO - 205/2008
TURFING OF EARTH WORK AND
ROOF TREATMENT OF AMMO DUMP

1. **Turfing.**

- a. Heavy embankments, butts of ranges and earthen traverses will be properly turfed to minimize the damage to them in rain. The sods should be cut and lifted preferable from meadows growing thick grass.
- b. Patch turfing for making good existing earthen embankments at irregular intervals will also be done frequently.
- c. This should be included as an item or work in all new projects and should be gradually done from maintenance on existing earthen structures.

2. **Ammo dump.**

- a. From now onward, the roof of Ammo dump/Magzine store should not be treated with earthen layer. The earth layer of all existing Ammo dump roof to be removed immediately and be treated with 50 mm thick P.C.C. which will be composed of wire mesh and admixture.
- b. In all future construction, the roof of Ammo dump/Magzine store to be constructed using “Hollow Roofing Block” as per drawing issued vide letter no 1000/15/Policy/55/E-10 date 15th February 2006.

This supersedes Routine Instruction no 685 of 1990.

ROUTINE INSTRUCTION NO - 206/2008
EMPLOYMENT OF DEL - MUSTER ROLLS

1. In future all work of measurable nature will invariably be done through Contracts and DEL will only be engaged where work to be done is not susceptible of measurements or where it is of a very special or urgent nature. Para 303 MES Regs refers.
2. Sanction for employment of DEL on muster rolls will personally be given by a GE/AGE who will at the same time furnish the following particulars of sanction to the CMES:
 - a. Reference No of muster rolls
 - b. The name and nature of work
 - c. The amount of muster roll
 - d. The number of labourers included in the muster roll
 - e. The dates between which labour will remain employed
 - f. The site at which work will be done
3. From the GEs/AGEs reports referred to in the proceeding the CMES will be able to exercise effective control over the use of DEL engaged on muster rolls and where necessary have surprise checks carried out through his staff officer.
4. A progress register will be maintained by GEs/AGEs for each subdivision in which brief particulars of the work done and materials issued against each muster roll will be recorded.
5. The following instructions are issued for guidance of all concerned:
 - a. Mustering shall always be done in ink and in the morning, before the labour is dispatched to work and not in the evening .
 - b. Marking shall be present or any other letter or letters other than X if workmen are charged to different head of allotment.
 - c. Absentees shall be marked X at the mustering time. Keeping the columns for absentees blank is a punishable offence.
 - d. Numbers of men present shall be totaled at the bottom, and initialed by the mustering individual every morning.

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- e. Muster rolls shall be checked by the GEs/AGEs and initialed at least 4-5 times a month, except where this is not possible in case of a far off station from the GEs/AGEs office.
 - f. The inspecting officers should note that if they reach the mustering place a few minute earlier or later than the mustering time, the object of surprise check will not be achieved.
6. In accordance with last Sentence of para 524 MES Regs, recipients of pay on a muster roll will not be required to affix revenue stamps and sign or place their thumb impression in the re marks column of the muster roll .
7. Paying officer's initials the name of the recipients are adequate proof of payment.

This supersedes Routine Instruction no 688 of 1990.

ROUTINE INSTRUCTION NO - 207/2008
EMPLOYMENT OF DEL CASUAL PERSONNEL

1. Employment of DEL both Permanent & Temporary gangs, will be sanctioned as under:

a. By DW & CEs who will sanction the number and trades with rates of pay of Casual Personal employed:

- (1) Permanent gangs
- (2) Temporary gangs for immeasurable work.
- (3) Chowkidars to guard the vacant buildings/ Bungalows completely unoccupied.
- (4) CsMES Within their financial powers and when otherwise permissible under MES Regulations.
- (5) All Casual personals required, but not covered in (a) above.

2. In all cases the following scales will be adhered to:

a. **Buildings.** The minimum scale are based on the capital cost of building with additions to meet the special circumstances as enumerated below:

- (1) Permanent buildings in the plains-1 man per Tk. 30 lacs.
- (2) Permanent buildings in the hills-1 man per Tk. 20 lacs
- (3) Temporary buildings-1 man per Tk. 10 lacs

In very exceptional circumstances when the majority of a Sub - Division consist of temporary buildings more than 33 years old and also in poor condition, the CMES may authorise 1 additional man per Tk. 10 lacs capital value of such buildings.

Additions

(1) When the total number as calculated above is 9 or under-add 1 Man. For this purpose outstations as defined in para 4 shall be calculated separately.

(2) Where there is considerable water borne -add 1 man sewage (or in exceptional cases add 2) sanitary coolie.

- (3) Married Officers bungalows whether Govt. owned or hired:
 Command House - add 2
 Flagstaff House - add 1
 For 100 other Bungalows - add 3
 (4) Hospital per 100 beds - add 1
 (5) Command per Corps HQ - add 1
 (6) For each store yard whose chowkider is not on the establishment pay bill - add 1

b. **Roads**

(1) This item is applicable to roads which are included in the road Register i.e. entrance roads to bungalows etc must not be added to give an increased length.

(2) The members include mates, the practice in some areas of mates being supervisory must cease.

c. **Maximum Scale**

Ser	Type of place	Per KM/Men	Rmk
1.	<u>Plain</u> a. where roads concentrated as in Cantt and large Depot b. where roads are long stretches as in high ways c. Paths over 1.20M wide	per KM ½ per KM 1 per KM 1	
2.	<u>Hill</u> a. Motorable roads b. Paths over 1.20M wide c. Where the permanent gangs as calculated above is 3 men or less add	per KM 1 per KM 1 per KM 1	
3.	<u>Air Field</u> a. Runway & overruns & aprons when 30M wide and over per 350M b. Taxi Tracks & Aprons less than 30m wide per KM c. Roads less than 30m wide per KM d. Unoccupied airfield ADD per runway	1 man 2 Men ½ Man 2 chowkider	

d. **Furniture.** Renewals are done by contract; repair contract is seldom satisfactory except for caning chairs and restringing charpoys. The total cost of the labour employed (permanent and temporary combined should be about 50% to 55% of the repair allotment).

e. Chowkidars for Vacant building

f. Bungalow with outhouses or equivalent in isolated buildings 1

To 10 barracks or main buildings in a group (small buildings to be disregarded) 2

For each additional 10 main buildings or less add 1

But if fenced with unclaimable fencing” reduce the scale to 2 to 15 main buildings for each additional 15 or less add

ADD

Per building containing valuable machinery or stores, add 1

Note:

1. In secluded areas particularly liable to thefts substantiated cases for increase of scale will be sympathetically considered.

Temporary Gangs
Immeasurable Works

3. These must be sanctioned by the CMES (see para above) and great care must be exercised that:

a. The work should not be such as should be done by the permanent gang.

b. The period of sanction is not excessive.

4. The work is mainly seasonal such as grass cutting on airfields, removal of landslides on hill roads etc. In urgent cases the GE/AGE must exercise his discretion and obtain covering approval from the CMES later.

5. The scales, however, include all permanently employed personnel both skilled and unskilled including supervisor such as Supervisor B/R, mates, gangers, foreman etc. In many cases calculation results in fractions of a man such fractions will be added together for each station or

outstation before rounding off is applied. When rounding $\frac{1}{2}$ or over counts as 1 under $\frac{1}{2}$ is ignored. In the above, an outstation is held to mean a location sufficiently far removed from the HQ Station and other outstations to render a separate gang imperative. The charge of a SDO must NOT be divided for calculation purposes merely for administrative convenience of SAE/Overseers, supervisors etc.

6. In all cases the scales given above will be adhered to as a MAXIMUM. Exceptional cases, where it is considered necessary to exceed these scales will be reported by the CMES to the DW & CE concerned for a ruling accompanied by full reasons in justification thereof. Such cases should be very rare. It is not intended that permanent gangs shall be automatically increased to the maximum scale. There are numerous cases, specially where unit self-help is well organized in which lesser numbers will suffice. Such cases will normally involve a few men only. All request or increase over the numbers at present employed will require very careful consideration by CMES before recommending the case to DW & CE.

This supersedes Routine Instruction no 684 of 1990.

ROUTINE INSTRUCTION NO - 208/2008
EXPENSE STORES

1. Procedure for the accounting of Expense stores is laid down in para 679 of the Regulations for the MES. This is required to be strictly followed
 2. For better control and check over the issue of store to the DEL. for petty repairs etc, the following detailed instructions will be put into effect immediately by the GEs/AGEs.
 - a. A separate store in-Hand Ledger (BAFW-2223) will be maintained in each Sub-Division for each **Code Head** of Account Where a Sub-Division is operating only one head of account. Store-in -Hand Ledger will be maintained.
 - b. Not more than one Baby Indent Book (BAFW-2205) will kept in use for each store in Hand Ledger.
 - c. Store required for the repairs to be executed will be carefully assessed and priced baby Indents made out.
 - d. When the value of store in a day in one Sub-Division exceed Tk. 2000/- the indents for the day will be put up for the counter signature of the GE/AGE on the next working day.
 - e. Each SDO will personally show his Baby Indent Book every fortnight to his GE/AGE who will sign the last counterfoil in token of his scrutiny. This is intended to enable GE to watch that daily issues are reasonable.
 - f. Corrections in the Store –in-Hand Ledger and Baby Indent Book will be avoided Where corrections are absolutely necessary, these will be initialed and dated by the SDO.
- The above instructions will equal/ apply to the Road Metal Register (BAFW-1809) for which a separate Baby Indent Book (BAFW-2305) will be maintained

This supersedes Routine Instruction no 687 of 1990.

ROUTINE INSTRUCTION NO - 209/2008
STORM DAMAGE/BARRACK DAMAGE

1. Replacements of broken panes of glass are normally charged as Barrack Damage to the occupant. Sometime under the excuse of storm damages, these glasses are replaced from maintenance grant and are not charged as barrack damages. All doors and windows are provided with wooden stops and tower bolts etc, it is therefore the duty of the occupant to close the doors and windows at the time of storm to avoid damage. If however, some of the wooden stops and tower bolts are missing/broken, these should be immediately noted in the Unit Demand Register and replaced at once chargeable to the maintenance. The question of Barrack Damage if any for these items, will be dealt with separately.
2. To avoid confusion it should be noted that storm damages happen due to temporary structures or faulty designs where as barrack damages are on account of negligence of the occupant. Therefore, the question of charging barrack damages to maintenance grant under the cover windstorm should never arise.
3. In case of pivot-hung shutter/windows, there are not changes of panes of glass being broken by windstorm and such broken panes of glass should never be charged to maintenance grant.

This supersedes Routine Instruction no 221 of 1990.

ROUTINE INSTRUCTION NO - 210/2008
PERIODICAL SERVICES MEASUREMENT BOOKS.

1. Periodical Repair Services of which measurements are to be recorded in this book are:

- a. White washing (both internal and external)
- b. Colour washing (both internal & external)
- c. Painting (both internal and external)
- d. Oiling (both internal and external)
- e. Tarring and tar-varnishing (both internal and external)
- f. Distempering (Internal)
- g. Snowcem wash (External)
- h. Mansion Polish
- j. Acrylic weather coat (External)
- k. Plastic paint (Internal)

2. Periodical Service Measurement Books for new buildings referred to in paragraph 335, Regulations for the MES, will be prepared in accordance with the standard Method of Measurements, and existing books should be revised on the same method as opportunity offers. All entries in the books will be made in ink. A register of these books will be maintained.

3. AQS will inspect the books to ensure that they are corrected up to date. When prepared, not less than 5 percent of the measurement will be checked by an officer and a certificate to this effect will be entered in the book. All corrections will be checked and initialed by an officer.

4. The book will be prepared as under:

- a. The sequence of buildings in the measurement books will follow that in the Register of Buildings.
- b. Under the name of the building in the heading will be given an outline plan (if considered desirable) of the building. This needs not to be scale but should be provided with an approximate North point. If the building consists of more than one room, the rooms verandahs, passages, etc. will be lettered A, B, C, D etc. on the plan, and will be referred to in the measurements under these letters.

- c. Each room, Verandah, passage and the outer side of the building will be dealt with separately and in it's entirely under the separate heading for each class of work, i.e. for white washing, painting, etc. Deductions, if any will follow the measurements of the rooms or other parts of the buildings to which they refer. It should be borne in mind that in the case of a door or window opening from a room into a verandah, one side of the door or window will come under the measurements for the room the other side will come under the measurements for verandah. In the case of windows in the outside wall one side will come under the measurements for the room, the other side under the measurements for exterior work on the side of the building.
- d. It is essential that every item of measurement should be clearly located and explained; hand sketches should be freely employed for the purpose and notes should be made against measurements, where necessary. For instance in the case of an irregularly shaped painted iron roof might be divided into sections clearly lettered on an outline plan of the roof.
- e. "All round" measurements for white or colour washing should be avoided and each wall should be separately measured.
- f. Where there are two or more rooms, etc. for which the measurements are the same, one room should be measured up entirely under the item of work under consideration, say room A for white-washing then under the headings room B, room C, etc. for white-washing should be entered "as for room A" and the total. Each separate measurement should not be multiplied by the number of similar room.
- g. All Headings must be written clearly on separate line and must be underlined.
- h. At the end of the measurements for each building an abstract will be made showing the quantity or work in each room under different categories and similarly for the quantity of each type of external work.
- j. A general abstract for each set of lines, or Group of Buildings will be recorded in a separate book and kept up to date for each subdivision for use as a Standard Estimate.

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k. The preparation of books must never be left entirely to an SAE/overseer. If an SAE/overseer takes measurements, at least 10 per cent must be checked by the SDO, who will also closely supervise the preparation of the books in general.

5. On the completion of any additions or alterations to a building affecting the record measurements of the Buildings, the SDO will arrange for the relevant book to be corrected immediately on completion of the work. It will then be submitted to the GE/AGE for his signature to the corrections.

This supersedes Routine Instruction no 222 of 1990.

ROUTINE INSTRUCTION NO - 211/2008
QUARRIES

1. a. Quarries on Class A (i) lands in Cantonments are in the charge of the MES. They cannot be leased to private individuals, but this does not affect their use by contractor for purpose of fulfilling a Government contract.

b. Quarries on land outside Cantonment in charge of the MES may be leased to private individuals; this obviates the necessity of collecting royalties.
2. When earth or stone is removed by the MES or Contractors employed by them for military purposes from land in Cantonments under management of the Military Estates officers, no royalty shall be charged, but the prior permission of the Military Estates officer will be obtained by the MES.
3. Quarries in Cantonments may also either belong to or, in the case of Class B (3), and (5) land, be entrusted, for management, to a Cantonment authority, who may set apart particular places for quarrying purposes and charge a royalty on all materials removed there from, except when quarrying is directly carried out for a public purpose by Government, i.e. not through a Contractor

This supersedes Routine Instruction no 200 of 1990.

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**MILITARY ENGINEER SERVICES
BANGLADESH ARMED FORCES**



PROVISIONAL
COMPENDIUM
OF
MES ROUTINE INSTRUCTIONS-2008

PART – III
STORES & FURNITURE

PUBLISHED BY: AHQ, E IN C'S BR, WKS DTE, DHAKA CANTT.

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CHAPTER-I

ROUTINE INSTRUCTION NO 301/2008
GENERAL ORDERS FORECAST OF DEMAND

1. The DW & CE's will supply the E in Cs Br (Works Dte) ESD (MES) with forecast estimates of stores each year, Preceding that during which supplies are actually required, so that they can arrange for adequate stock to be held against subsequent demands.
2. Full trade nomenclature will invariably be used in ordering or indenting articles from the trade and SDLES, section & Sub-Section when forecast demands are made. All the demands will be scrutinized by an F/S officer except E/M & W/S articles. The demand of all the E/M & W/S articles will be scrutinized by an E/M Officer.
3. Copies of running contracts and any subsequent amendments there to are distributed direct by ESD MES to all indenting/ demanding officers whose list is supplied by DW & CE direct.
4. All the serviceable surplus stores/articles are handed over to the ESD MES through a letter issued by E in C's Branch (Works Dte).

This supersedes Routine Instructions No 301 of 1990.

ROUTINE INSTRUCTION NO 302/2008
STORE HOLDINGS

1. Insistence on the principle that a contractor should supply all stores whenever possible will result in saving in money, time and labour on the part of the GE and his staff. The principle will therefore invariably be followed.

2. The issue of materials to contractors under the conditions of their agreement is permissible, solely, for the bonafide requirements of Govt. works. SDOs should, therefore, take necessary steps to ensure that the total issue to a contractor in connection with a particular work are limited to the reasonable needs of that work. This precaution is particularly necessary when the rates at which any materials are issued are lower than the prevailing market rates or the latter are expected to rise appreciably or the materials are not available in the market.

3. There are certain well-defined exceptions to this principle viz:
 - a. Stores which are purchased from foreign countries.
 - b. Stores which the Govt. is in a position to buy at cheaper rates owing to large amount of stores required. Running contracts usually exist for such articles.
 - c. Special articles required for a particular purpose.
 - d. Stores required for use with direct labour e.g. in maintenance or W/S projects.

4. The stock held should be as low as possible, so that the unproductive capital tied up in stocks of stores may be reduced to minimum possible. The fact that work is in hand necessitating the supply of stores on running contracts vide above para is no justification for holding a large stock. Whenever possible stores required for work should be brought and issued direct to the work, issues from stock being limited to cases where it is more economical. Purchase of stores for MES stock shall be made by bulk purchase, based on forecasts of detailed issues. The principle underlying para 320 of MES Regulations should also be borne in mind.

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5. All complaints regarding qualities of supplies, shortages, damages, delay in delivery etc of stores obtained by indent through ESD MES or direct from firms on rate contract concluded by E in Cs Branch (Works Dte) will be reported to the respective DW & CE's only in the case of shortage, damages and delay to the firm direct.

This supersedes Routine Instructions No 303 of 1990.

ROUTINE INSTRUCTION NO 303/2008
MOBILISATION STORES

1. The forecast of L of C reserve stores will be prepared and standardised by each DW & CE in consultation with their respective services HQ Para 625 MES Regulations also refers. The standardised Lists of stores will be known as “Mobilisation scales of Engineer stores” and stores will be held in ordnance Depots who are responsible for care and custody to the articles of mobilisation. Issue from those stocks will never be made in ordinary course until the new provision is made. Charges in pattern will be affected whenever possible by their turn over.

2. A local representative of MES may inspect “L of C reserves” stores of General Hospitals jointly with representative of ordnance and Medical authorities, MES Regulations para 358 (v) refers.

The mobilisation stores requirements will be reviewed yearly and fresh lists will be submitted to E in Cs Branch by 31st May each year for onward transmission to OS Dte.

This supersedes Routine Instructions No 305 of 1990.

ROUTINE INSTRUCTION NO 304/2008
CARRYING OF ENGINEER STORES

1. The mode of carrying of Engineers stores will be the cheapest.
2. In case of emergency para 613 of MES Regulations may be followed.
3. The Under mentioned officers are empowered to sanction extra expenditure in case of necessity, on the despatch of stores other than by the cheapest route or mode of conveyance to the extent indicated below:

Ser	Appointment	Amount in Tk	
		Existing	Proposed
1.	E-in-C	1,000/-	50,000/-
2.	DW & CE	600/-	25,000/-
3.	CMES	200/-	10,000/-
4.	GE	20/-	5,000/-
5.	AGE (Independent)	20/-	2,000/-

The amount shown in bold colour will be applicable after approval of MES Regulations 2008.

This supersedes Routine Instructions No 306 of 1990.

ROUTINE INSTRUCTION NO 305/2008
PACKING AND DESPATCH
OF STORES FOR TRANSIT

1. Instructions will be issued by DW & CEs as to the methods to be employed for all kinds of stores normally handled to reduce breakage in transit to an absolute minimum.
2. The method of preferring claims against transit agencies for loss or damage or action to be taken when stores are unreasonably delayed is set out in FR Regulations-75 (ii) Army Regulations Instruction (ii) para-403 & section-24 (F) movement of stores Army Regulations rule (i).

This supersedes Routine Instructions No 307 of 1990.

ROUTINE INSTRUCTION NO 306/2008
CARE, CUSTODY AND STOCK
FLUCTUATION OF STORES

1. The GEs/AGEs are responsible for arrangement of weighing machine and scale, prevention of deterioration in stores.
2. Storemen will keep metal tokens of three different shapes and colours one of which they will affix to the tally card of any article of which:-
 - a. The minimum authorised holding has been reached but no replacement indent placed; Red circular token.
 - b. The minimum has been reached but replacement indent placed yellow rectangular token.
 - c. No issue has been made for twelve months or over; green rectangular token.

This supersedes Routine Instructions No 309 of 1990.

ROUTINE INSTRUCTION NO 307/2008
STORAGE OF DANGEROUS ARTICLES

1. All concerned will be instructed in the storage and handling of gas cylinders, acid and ammonia containers, with particular respect to:
 - a. The coloured panels distinguishing different contents of cylinders.
 - b. The precautions to be taken in opening and connecting fresh cylinders.
 - c. Glass ammonia containers should be placed in water below 60⁰ F or into ice for one hour immediately before opening. They will be held in the open air, with the neck away from the operator and the bottles covered with thick cloth while the stoppers are being loosened and will be kept in cool stores away from acids.
 - d. The precautions to be taken in entering a room to stop a leak of gas (The local medical authorities will be asked to advise in the particular circumstances who may supply a respirator, for the purpose).
2. The rules for storing and stacking petrol in tins or drums and suitable specification for a special building for petrol storage. They will be applied for storage of kerosene also.

This supersedes Routine Instructions No 311 of 1990.

ROUTINE INSTRUCTION NO 308/2008
LOAN ISSUE OF MES STORES

1. In case of an emergency, such as floods, earthquakes, breakdown of water supply, electricity etc when the time factor is of extreme importance, Formation Commanders may sanction loan issue direct from MES stock who will comply with their orders, subject to availability of stocks, but application will be made by the unit/formation concerned to E in C's Br (Works Dte) simultaneously for covering sanction. The MES concerned will also submit a separate report to E in C's Br (Works Dte) giving details of the requirements and stores thus issued.
2. This supersedes Routine Instructions No 313 of 1990.

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ROUTINE INSTRUCTION NO 309/2008
POLICE INVESTIGATION INTO THEFT
OF MES STORES

1. Original ledgers or any other documents will not be handed over to the investigating officer of police Department. Only copies of the relevant portion will be handed over certified by MES gazetted officer and the original record will be signed by the investigating officer and witnessed in token of copies received by him. Police may take photograph of the relevant portion of seized documents.

2. The responsibility of safe custody of the original documents until the decision of the case will be on the MES officer concerned. The Officer-in-Charge of the same when summoned will produce original documents in the Court.

This supersedes Routine Instructions No 315 of 1990.

ROUTINE INSTRUCTION NO 310/2008
INSURANCE OF DEFENCE STORES
IMPORTED BY SEA/RAIL

1. The Govt. has sanctioned insurance of Defence stores referred below to be insured from “Suppliers” warehouse to ultimate consignee’s “warehouse” instead of “Port to Port”. List of defence stores to be insured as under:

- a. Asbestos Cement sheets & Asbestos Cement components
- b. Glass sheets & plate glass
- c. Stores such as acid and other chemicals transported in glass containers.
- d. C.I pipes and fittings, manhole covers and cistern.
- e. Earthenware/Stoneware pipes and fittings
- f. Sanitary stores excluding metal fittings
- g. Electric lamps, fluorescent lights & tubes, Porcelain insulators and shackles.
- h. Bulk head fittings, shadowless light fittings, Inspection lamps, reflectors and search lights.
- j. Rectifiers mercury, accumulator’s batteries
- k. Delicate instruments, Scientific, Surveyors, Mathematical recording and testing instruments
- l. Domestic Refrigerators and Air Conditioners
- m. Cabinet, Blood storage
- n. Switch fuses iron clad and distribution boards.
- p. Cut out fuses, Porcelain.
- q. Wall board soft
- r. Electric accessories with bakelite or plastic covers such as lamps holder plug and sockets, switches etc
- s. Heaters, electric water storage
- t. Batteries Secondary
- u. Battle batteries
- v. Binoculars
- w. Light inspection lamps, reflectors, search lights and flood lights.
- x. Chronometers
- y. Cinematographic, photographic apparatus and stores
- z. Clinometers

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- aa. Compasses
- ab. Converters range and switch
- ac. Crokery and glassware
- ad. Delicate and fragile parts of heavy machinery
- ae. Gauges and meters
- af. Instrument flash supporting
- ag. Instrument panels
- ah. Laboratory equipment and chemicals
- aj. Microphone grind
- ak. Mirror driving
- al. Periscope.
- am. Platinum wire
- an. Riders and predictors with conneed stores and their test equipment
- ap. Stand instrument
- aq. Stereoscopes
- ar. Telecommunication equipment and wireless sets.
- as. Telescopes
- at. Test and experimental equipment
- au. Thedolites
- av. Unit sealed bean head lights.
- aw. Watches
- ax. Glass winshield

2. This supersedes Routine Instructions No 317 of 1990.

ROUTINE INSTRUCTION NO 311/2008
STORE TRANSACTION - UA'S CHECKS

1. The following checks are exercised by the UA in respect of stores transactions:
 - a. The UA sees that the rates charged in receipt vouchers, receipted indents and the unstamped acknowledgements materials issued to contractors are correct in accordance with the contract agreement of contractors, where they exist, that the stores have been correctly allocated to the work concerned and that in the case of stores issued to a contractor for use on works for which he is to be paid for at inclusive rates, that fact of recovery from the Contractor has been shown on the indent, and if a contractor is only to be paid for fixing the cost of stores is allocated direct to the work concerned.
 - b. The priced stock list is issued by the GEs under paragraph 640 MES Regulations.
2. This supersedes Routine Instructions No 321 of 1990.

ROUTINE INSTRUCTION NO 312/2008
LIST OF MAIN HEADINGS OF FILES
(STORES & FURNITURE)

1. Following is list of main headings of files pertaining to Stores Section:
 - a. Stores - Rules and Regulations-Store procedure & Organisation
 - b. Stock taking and inspections
 - c. Stock (Stores for maintenance) & forecasts
 - d. Material Accounts (Stores for Projects) and Forecasts
 - e. Mobilisation stores (Authorisation, holdings etc)
 - f. Store in hand Accounts
 - g. Contracts for stores-Local/Direct purchase by MES Formations
 - h. Rate contracts
 - j. Disposal of stores
 - k. Losses of stores-Write off, discrepancies, damages, demurrage/wharfage etc
 - l. Store Accounting
 - m. Sale of stores
 - n. Manufacture/Repair of stores
 - p. Procurement of stores, budget and allotments
 - q. Movement of stores by Sea-Rail-Road & Air-Insurance of stores
 - r. Introduction of new stores
 - s. Furniture-General Designs, scales etc
 - t. Furniture-New supplies
 - u. Furniture- Maintenance
 - v. Contracts for supply of furniture
 - w. Barrack & Hospitals (Furniture) Schedules
 - x. Tools & plant - Provision, Renewals, maintenance
 - y. Catalogues and Price lists, SDLES, ASHLES
 - z. Reports & Returns
2. This supersedes Routine Instructions No 323 of 1990.

CHAPTER-II

ROUTINE INSTRUCTION NO 313/2008
FORMS IN USE FOR STORES AND FURNITURE

1. BAFW Forms etc for stores and furniture normally used are listed below:

- a. BAF-T-1731 Claim for compensation against Railway.
- b. BAF-W-1773 Electric bulb account.
- c. PW-01 Tender for piece work (for furniture)
- d. BAF-W-1792-F Schedule of furniture.
- e. BAF-W-1796 Abstract of estimate for small work (for furniture).
- f. BAF-W-1805 Demand register.
- g. BAF-W-1810 Comparative statement of tenders.
- h. BAF-W-1811 Register of authorised furniture.
- j. BAF-W-1814 Div/Sta furniture /T&P distribution ledger (outer and inner).
- k. PG-3 Running contract & tender for the supply of material & store.
- l. BAF-W-1823 Work Order.
- m. BAF-W-1824 Unit furniture distribution ledger.
- n. BAF-W-1825 (Revised) Transfer of charges.
- p. BAF-W-1826 Unstamped acknowledgement of stores by contractor.
- q. BAF-W-1829 Supply order against running rate contract.
- r. BAF-W-2096 Receipt/Issue voucher.
- s. BAF-W-2157 Priced Stock Account.
- t. BAF-W-2166 Priced/Surplus stock list.
- u. BAF-W-2181 Fans & Meter register.
- v. BAF-Z-2180-B Indent form for bleaching powder etc

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- w. BAF-W-2193 Annual T & P return (for furniture).
- x. BAF-W-2194 Monthly furniture /T&P/Stock return.
- y. BAF-W-2200 Demolition register.
- z. BAF-W-2202 Octroi pass.
- aa. BAF-W-2206 Advice of sending Railway receipt.
- ab. BAF-W-2211 Register of authorised furniture.
- ac. BAF-W-2219 Annual furniture return.
- ad. BAF-W-2221 Stock taking report.
- ae. BAF-W-2222 Estimates for new supplies/renewals of furniture/ T&P.
- af. BAF-W-2223 Store-in-hand ledger.
- ag. BAF-W-2225 Materials register.
- ah. BAF-W-2226 Summary of material Account.
- aj. BAF-W-2242 Construction Account (Outer sheet).
- ak. BAF-W-2242-A Construction Account (Inner sheet).
- al. BAF-W-2242-B Construction Account (Cover).
- am. BAF-W-2242-C Construction Account (Abstract).
- an. BAF-W-2251 Monthly expenditure return.
- ap. BAF-W-2253 Transfer Receipt/Issue/Expense Voucher.
- aq. BAF-W-2254 Bill forwarding certificate.
- ar. BAF-W-2255 Muster roll.
- as. BAF-W-2256 Casual Labour roll.
- at. BAF-W-2257 Labour report.
- au. BAF-W-2258 Casual personnel bill.
- av. BAF-W-2260 Hand Receipt.
- aw. BAF-W-2261 Measurement Book.
- ax. BAF-W-2262 Final contract bill.
- ay. BAF-W-2263 Running Account receipt

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az. PG-3	Contract for supply of new B & H furniture.
ba. BAF-W-2273	Stock suspense Account.
bb. BAF-W-2274	Indent for stores.
bc. BAF-W-2279	Stock/ furniture register/Tools & Plant.
bd. BAF-W-2280	Tally card.
be. BAF-W-2305	Indent book for materials stores.
bf. BAF-W-2307	MES Sch of rates & Specifications.
bg. BAF-W-2316	Stock purchase register.
bh. BAF-W-2326	Convoy note.
bj. BAF-W-2327	Packing note.
bk. BAF-W-2330	Railway wagon register.
bl. BAF-W-2332	Demand for spare parts machinery.
bm. BAF-W-2350	Bond to secure performance of agreement.
bn. BAF-W-2402	Demand for Engr stores & Plant and continuation sheet.
bp. BAF-W-2410	Demand for Engineer stores, Plant & equipment of Engineer supplies and continuation sheet.
bq. BAF-W-2411	Annual return of surplus & deficient (Barrack & Hospital special Tech and Office BN) furniture.
br. BAF-W-2412	Register of U/S furniture
bs. BAF-W-2413	Register of furniture authorised for each line, set of quarters etc
bt. BAF-W-2414	furniture report & exchange voucher.
bu. BAF-W-2416	Discrepancy report.
bv. AFG-985	Discrepancy report form used for consignment received from Ord Depot ESD (MES) or Ammunition Depot.
bw. BAFA-498	Loss statement.

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- bx. E-3 Form-D Disposal of surplus stores.
- by. PS-1 Indent on DGDP
- bz. E-3 Form-B Used by ESDs when offering alternatives
- ca. Dis-51 Declaration of surplus stores to DGDP/ESD (MES).
- cb. BAF-A-58 Sale Accounts of stores disposed of by auction.

Note:

1. No amendment will be made to standard Army Forms W-series, except with the approval of the E in C's Br. This does not, however, preclude the rectification of any printed errors in contract and other forms.

This supersedes Routine Instructions No 325 of 1990.

ROUTINE INSTRUCTION NO 314/2008
STORES FOR PROJECTS FORECAST

1. Annual forecast is an expected requirement of stores for the following year, which is always approximate. It is submitted to E in C's branch (Works Dte) ESD (MES) on due dates by DW&CEs of all Services. It must be ensured that the demands are prepared according to SDLES and separate sheets are used for each Sub-Sec. On the basis of this overall standard forecast of stores, CsMES work out/scrutinise the actual requirement of their subordinate formations including E/M demands when, projects are approved and the flow of supply of stores is balanced accordingly.

2. A suggested basic list of stores supplied by MES to contractors for one 92.90 Sqm plinth area within 20 percent variation is given below:

- a. Bars round 1500 Kg.
- b. Structural steel 75 Kg
- c. Cement 25 tons
- d. Binding wire 50 Kg
- e. CGI sheet 1.5 No
- f. GI sheet 1.5 No
- g. Plain/sheet glass 9.29 sqm
- h. Copper sheet 1.58 sqm
- j. Plastic bitumen 50 Kg
- k. Bitumen 150 Kg
- l. Building paper 32.52 Sqm
- m. XPM 2.79 Sqm
- n. Wire gauze 5.57 Sqm
- p. Hard Board 1 No
- q. Soft Board 1 No

3. Stores required for roads, overhead tanks, RCC poles, Security Fence etc can also be calculated in similar manner.

This supersedes Routine Instructions No 331 of 1990.

ROUTINE INSTRUCTION NO 315/2008
PROCUREMENT OF STORES

Responsibilities

1. ESD (MES) E in C's Branch (Works Dte) to procure and supply all kinds of stores for MES. The functioning of Material at Site with Divisional stocks as laid down in the MES Regs (para 646 to 652) will be followed.

Stores for Works

2. Works contractors will be required to provide all local materials such as sand, gravel, stone, lime, bricks, roofing tiles well seasoned soft wood etc and will be encouraged to provide as many as possible of the other stores required, if economical, cement, steel, hard wood, electric lamps, machinery including electrical apparatus etc will be supplied by MES procured through ESD MES/TCB, BCIC or equivalent.

3. The officer who arranges a works contract:

a. is responsible that the stores required and to be supplied by the MES are available in the correct quantities in sufficient time to ensure that progress of work is not delayed.

b. should verify that the contractors has made timely arrangement for the supply of stores and should keep a check on stores receipts, issuing appropriate instructions to the contractor where necessary.

4. Following note is to be inserted in schedule B of the contract where applicable:

“Stores included in this schedule are meant to be issued for actual incorporation in the works covered by this contract. No stores will be issued for shuttering, centering and scaffolding. This will be arranged by the contractor.”

Store Demand

5. Urgent and special demands will continue to be made on ESD (MES) urgent demands will be enfacd “URGENT” and signed by CMES Issue order or N. A. certificate will be sent by ESD within one week of the

receipt of these demands and stores will be despatched within ten days from the date of receipt of the issue order by ESD (MES). Cases of abnormal delay will be reported to E in C's Branch (Works Dte) by the indentors.

6. In the case of non-availability of the stores under normal or urgent demand, the following procedure will be adopted:

a. If the stores are expected in the ESD (MES) will indicate the date for "DUES IN" or offer substitutes and if this does not suit indenter, he may resort to local purchase.

b. If the stores are not available in the market and there is no "DUES IN" within reasonable time, the substitute stores to be issued in consultation with the indenter.

7. Cement to be allotted by TCB/BCIC or equivalent to DW&CEs against forecast statement sent to them.

8. Cement bags must be stacked not exceeding ten bags laid flat on ventilated wooden floors and so arranged that air can circulate freely under the stacks. Issues will be made from the stack bearing the earliest date on tally card.

9. Detailed policy for cement is shown as Annex 'A' to this RI.

GgBGm G wntgU wbePb, msMô I e'enti i bWZgvj v-2008

eivZ t

- K| KtãuWqvg UzGg B Gm i "UJb Bb ÷ tKkbm-1990 Gi Abt"Q` -333|
- L| tmbvm` i, B Bb wmo`i kvLv, cZ`cwi` ßi cÎ bs 300/4/B-3 Zwi L 26-02-2005|
- M| tmbvm` i, B Bb wmo`i kvLv, cZ`cwi` ßi cÎ bs 100/Uwm/B-1 Zwi L 08-05-2005|
- N| tmbvm` i, B Bb wmo`i kvLv, cZ`cwi` ßi cÎ bs 200/9/Kwi Mwi mtãsj b/B-2 Zwi L 05-04-2006|
- O| tmbvm` i, B Bb wmo`i kvLv, cZ`cwi` ßi cÎ bs 200/9/Kwi Mwi mtãsj b/B-2 Zwi L 31-08-2006|
- P| Gj wRBwW KZK cÿxZ gvb wqšY g'vbgvj - 1998|

wntgU t

2| GgBGm Gi wbgP KvtR wntgtUi e'envi AZxe Mj "ZcYp wbgP KvtR Bnv cãvZ msthvRK (Binding) mvgMô wntgte e'eüZ nq| th tKvb wbgP mvgMô , bMZ gvb I `enkto`i DciB wbgP Yi gvb I `vqxZ; wbfP Kti |

3| wntgtUi cKvi tf` t i vmvqubK Dcv`vbi Dci wfvE Kti wntgU cãvZ `ß fvtM fvm Kiv nq, h_v t cÿKwZK wntgU I KwÎ g wntgU|

4| wntgtUi Dcv`vb wntgtUi Dcv`vb mgn gj Z `ß fvtM wef³ t h_v-LwbR Dcv`vb Ges GumW I ¶vi xq thSM|

5| wntgU cÿZ cÿvj x tcvUj`vU wntgU mvaviYZ `ß c×wZtZ cÿZ Kiv nq| c×wZ mgn h_vµtg Av`c×wZ I i`c×wZ|

6| wntgtUi j`vetiUix cix¶v wntãv³ j`vetiUix cix¶v mgn ni gva'tg wntgtUi , YMZ gvb wba¶ Y Kiv hvqt

K| m¶Zv (Fineness)cix¶v wntUk cÿvY Pvj ybi 170 bs Pvj ybtZ Pvj tj Pvj ybtZ Aenkto`i cwi gvY _vKte t

- (1) mvavi Y tcvUj`vU wntgU 10%
- (2) i`wicW nvtWbs wntgU 05%

L| `vfwek Zvij` (Normal Consistency)cix¶v wntgtUi mvf_ wvfbœ AbcvtZ cwb wgnktq wntgU tc÷ `Zwi Kiv nq Ges fvbtkU htšj Lvov `tEi wba cÿš-10 wgvj wgvvi e'vfm cãvi msthvM Kti ievi wis G m` cÿZ tct÷ cY©Kti cãvti wK wbtP cãUdtgP Dci `vcb Kti GUVi Dcti Zj cãvti wbaZj `uk© Kti `vfwekfvte tQto w'tj th AbcvtZi tct÷ cãvi 33-35 wgt wgt cÿek Kti, H tc÷ B `vfwek Zvij` (Normal consistency).

M| c0_wgK RgvU exZvi mgq (Initial setting time) cixflv | ʻfveK Zvi tʻi i wntgU tct÷ i evi wi silU cY©Kti tct÷ cY©wi silU Lvov `É eivei wK wbtP c-vUdtgP Dci ti tL Lvov `fEi wba c0š-1 wgt wgt e'vʻmi mPwU mshp Kti mʻPi wba c0š-tct÷ i Dcti i Ztj i ʻútk©Gtb ʻfveK fite t0to w` tʻj th mgq 35 wgt wgt c0ek Kti wntgU c0.g cwb wgtYi mgq nʻZ H mgq chš-mgqK c0_wgK RgvU exZvi mgq (Initial setting time) aiv nq| mvaviYZ tcvUʻvU wntgU Gi tʻflʻt G mgʻqi cwi gvY 30 wgtYi Kg bq|

N| Povš-RgvU exZvi mgq (Final setting time) cixflv | hšjLi Lvov `fEi wba c0š-5 wgt wgt e'vʻmi mP mshp Kti Dctiv³ tct÷ i Dcwi Ztj i ʻútk©Gtb ʻfveK Ae-vq t0to w` tʻj th mgq tct÷ i Dcti i agvĀ GKUv Pʻfci `vM cto; wntgU c0.g cwb wgtYi mgq nʻZ H mgq chš-mgqK Povš-RgvU exZvi mgq (Final setting time) aiv nq| mvaviYZ tcvUʻvU wntgU Gi tʻflʻt G mgʻqi cwi gvY 10 NÉvi Awak bq|

O| LžnbZv (Soundness) cixflv | G cixflv wj P'vUwq qvi (Le Chatelier) htšj mrvʻth Kiv nq| Guv `β gl tLj v wczʻtj i ʻZwi wmwj Ūvi wtkl, hvi DʻPZv 30 wgt wgt Ges eʻm 30 wgt wgt|

P| i vmvqubK MVb (Chemical Composition) cixflv | wntgU Dcv vbmʻj v mwK AbcvʻZ AvʻQ wKbv A_ev wntgU tKvb tʻRvj AvʻQ wKbv Zv Rvbevi Rbʻ G cixflv Kiv nq| i wcv wvʻwbs wntgU I mvavi Y tcvUʻvU wntgU Gi i vmvqubK MVb GKB i Kg| i vmvqubK wtkl-tʻY Dfʻq wntgU tʻflʻt wba i dj vʻj cvl qv hʻte|

(1) Pʻbi mʻt_ wmwj Kv, G'vj wgbqvg I Avqib A- vBʻWi tʻbU AbcvʻZ wba i f c nʻe-

$$\frac{CaO}{2.8(SiO_2) + 1.2(Al_2O_3) + 0.65(Fe_2O_3)} = 0.66 \text{ to } 1.02$$

- (2) g'vMʻbwkqv `βkZvʻtki Awak nte bv (I Rʻtb)|
- (3) `nbRwbZ flʻqi cwi gvY `β kZvʻtki Awak nte bv (I Rʻtb)|
- (4) A`te Zj vbx i cwi gvY 0.5% Gi Awak nte bv (I Rʻtb)|
- (5) mvj dvi ŪB A- vBʻW we` gvb tgvU mvj dvti i cwi gvY 2% Gi Awak nte bv (I Rʻtb)|

7| wntgU mšgb kw³ (Compressive Strength) cixflv | `βw Av`R cxwZʻZ wntgU Kgtc0mf t÷š_ cixflv Kiv hvq| G tʻflʻt GKw cxwZʻZ gmj vi Ges Aci cxwZʻZ KbwʻtUi NbK e'envi Kiv nq| NbK ʻZwi i cxwZʻZ Av`R i'ewj I wntgU tʻ3 AbcvʻZi wgtY ewj I wntgU i'ewj Ae-vq I Rʻtbi 10% cwb wgtY Kti 7.06 tmwg AvKʻti i NbK ʻZwi Kiv nq Ges 24 NÉv chš-Kfl ZvcgvĀvq tgvĀ Af`šʻi

ti tL t`qv nq| 24 NÈv ci NbK₂tjv tgvì n tZ tei Kti cwi`vi cwb tZ Wj etq ivLv nq Ges wbt`KZ mg tqi (3 w`b/7 w`b/28 w`b) ci Dw t q Kt`c m f t`\$ _ tU ÷ h t`S j m v n v t h` m i v m w i` 0 K t`c m f t`\$ _ 0 c i x`v K i v n q | m v a v i Y t c v U j`v U w m t g`U G i R b` 3 (w Z b) w` b, 7 (m v Z) w` b I 28 (A v U v k) w` t b i S t a n d r a d m s b g b k w` 3 (C o m p r e s s i v e S t r e n g t h) h`_v`m t g 1740 w c G m A v B, 2760 w c G m A v B I 4060 w c G m A v B |

8| **cñviY kw³ (Tensile Strength) cix`v** | Av`R gmjv w` t q w e t K U`Z w i K t i 90% A v t c i`v K A v`Z v h y` A v e n v l q v q 64⁰-680⁰ d v t i b n v B U Z v c g v t`v q 24 N È v w K D w i s K i v i c i d g`n t Z G`_ t j v t K t e i K t i c w i`v i c v b D c t h v M x c w b t Z W j e t q t i t L t`q v n q | A Z c i w b t`K Z m g t q i (3 w`b/7 w`b/28 w`b) c i k w` 3 c i x`v i R b` c w b n t Z D w t q 0 t U b m v B j t`\$ _ t U ÷ h t`S j m v n v t h` t U b m v B j t`\$ _ c i x`v K i v n q | c 0 Z w U m g q K v t j i t U t`\$ A S Z 6 w U w e t K t U i M o c o Z v d j v d j B M 0 Y K i v n q | t U b m v B j t`\$ _ G i c w i g v Y m v a v i Y t c v U j`v U w m t g`U i R b` 3 w` t b 20 t K w R / e M`m t u g t G e s 7 w` t b 25 t K w R / e M`m t u g G i K g M 0 Y t h w i` b q | i`w c W n v t W 0 s w m t g`U G i R b` 1 w` b c i 20 t K w R / e M`m t u g . G e s 3 w` b c i 30 t K w R / e M`m t u g t U b k w` 3 n l q v e v`A b x q |

9| **w m t g`U i g w c h e q c i x`v** | g v V c h e q 4 w U c i x`v i g v a`t g w m t g`U i`_Y M Z g v b c i x`v K i v h v q | c i x`v m g t`n i w e`w i Z w e e i Y h`_v`m t g t

K| **A b f v Z (Feeling) cix`v** | w m t g`U f i v`e`w i w f Z t i n v Z X y K t q w K Q y c w i g v Y w m t g`U m s M h K t i D` 3 w m t g`U e x`v l`j x G e s Z R 0 x i g v a`t g t c l Y K i t j h w` V v È v A b f v Z n q G e s n v t Z`_w U` j v A b f v Z b v n q, Z t e B e S v h v q D` 3 w m t g`U G i`_Y v`_Y f v j |

L| **f v m g b (Floating) cix`v** | G K g u 0 w m t g`U c w b i t f Z i X y K t q w m t g`U t Q t o w` t j h w` t`L v h v q w m t g`U c w b t Z t f t m W j e A v t Q Z t e e S t Z n t e D` 3 w m t g`U i M y M Z g v b f v j |

M| **m s K r P Z (Shrinkage) cix`v** | G K U K i v c v Z j v K v P i D c i w m t g`U c w b 0 v i c v Z j v t c`Z w i K t i Z r`v b v r D` 3 K v P i U K i v c w b t Z 24 N È v W j e t q i v L v i c i h w` D` 3 t c t`\$ t K v b i f c d v U j c w i j w`v Z b v n q Z t e D` 3 w m t g`U i`_Y M Z g v b f v j |

N| **t d K R v i (Flexure) cix`v** | D` 3 c i x`v i R b` w m t g`U c w i u g Z c w b w` t q 1" x 1" x 8" A v K v t i i e K`Z w i K t i e K w U Z r`v b v r c w b t Z W j e t q w Z b w` b i v L v i c i e K w U i`_B c v t k`m g v b` t`Z j e R v q t i t L 6" `j t Z j`_B w U L j U`_v c b K t i D` 3 e t K i D c t i 15 t K w R I R b m g f v t e`_v c b K i v i c i l h w` e K w U i t K v b`_v t b m s t K v P b / c ñ v i Y c w i j w`v Z b v n q Z t e B D` 3 w m t g`U i`_Y M Z g v b f v j |

10| **G g B G m j`v e t i U i x`Z w m t g`U i`_Y M Z g v b c i x`v** | w m t g`U i`_Y M Z g v t b i e 0 j v s k B B n v i m s b g b k w` 3 (C o m p r e s s i v e S t r e n g t h) G i D c i w b f`P k j | G g B G m j`v e t i U i x`Z e Z g v t b`_i a g v t w m t g`U i m s b g b k w` 3 c i x`v K i v n q | A b`v b` c i x`v m g a`_Z`_i i` K i t`Y i K v h e r g c 0`m q v a x b | w m t g`U i 3 (w Z b) w` b, 7 (m v Z) w` b I 28 (A v U v k) w` t b i S t a n d r a d m s b g b k w` 3 (C o m p r e s s i v e S t r e n g t h) h`_v`m t g 1740 w c G m A v B, 2760 w c G m A v B I 4060 w c G m A v B |

11) মিষ্টিমিট ইন্ডাস্ট্রিজ লিমিটেড

K| eZgvtb evRvti cãvZ `ß aiþi mtgU cvlqv hvf"Q| hnv Ordinary Portland Cement (OPC) I Portland Composite Cement (PCC) bvtg cwiWZ| OPC tZ dvB Aivk wgnkZ _vtK bv, A_® OPC gj Z wKskvi I wRcmvg Gi wgyY| wKs' PCC tZ wKskvti i mvt_ dvB A'uk I wRcmvg wgnkZ _vtK|

L| New Bangladesh Standard-BDS EN 197-1:2003 Abhvqx mtgUtk cãvZt cvP fvM wef³ Kiv nq| hvi weeiY wbtgãcÖ È nj t

- (1) CEM-I : Portland Cement
- (2) CEM-II : Portland Composite Cement
- (3) CEM-III : Blast Furnance Cement
- (4) CEM-IV : Pozzuolana Cement
- (5) CEM-V : Composite Cement.

Dcti Dtg wLZ cvP cKvti mtgUtk e'envti mpeavt_®Avei tgvU mvZvk tkYtZ wef³ Kiv nq| G mKj mtgU ^Zixi cãv Kvpvgj (Pbvcv_i, gwU, eKmvBW, Avqib-Ii BZ"wi` imvqubK cãuqvi gva'tg wKskvi G cwiYZ Kiv nq) wKskvi, wRcmvg, "wM, dvB G'vk BZ"wi` |

M| tmbvm` i, B Bb wñi kvLv, cZ®cwi` Bi KZK wewfbængtq cwj wñ cÎ I Kwii Mwi mtsj þbi gva'tg mtgU e'envti Dci wewfbæw` K wbt` Rbv Rwi Kiv nq| tmbvm` i, B Bb wñi kvLv, cZ®cwi` Bi cÎ bs 300/4/B-3 Zwi L 26-02-2005 Gi gva'tg mKj cZ®KvRi Avi wñ wñ Xvj vB Ges 10" weK I qvtj i KvR tcvU®vU mtgU e'envti wbt` Rbv itqtQ Ges cv=vi mn mKj bb--=IKPivj KvR KtãúwRU mtgU e'envti wbt` Rbv itqtQ| eZgvtb evRvti OPC mnRj f` bv nI qvi Kvty PCC mtgU e'envti i wel qwU wetePvaxb i tqtQ|

N) GgBGM G eZgvtb e'eüZ mtgU mgn|

μwgK	e'tÜi bvg	e'envi	gše"
1	SKS Elephant	Structural Works	B Bb wñR
2	Holcim Red	Structural Works	Kwii Mwi mtsj b 1/2007 Gi wñxvš-Abhvqx
3	Rubi Cement	Structural Works	
4	Any Composite Cement	Plaster & Non-Structural Works	

GZ` wfbæDctiv³ e'tÜ/tKvãúvxi mtgU e'Zix evRvti cPij Z Ab` tkvb tKvãúvxi/e'tÜi mtgU tmbvm` i, B Bb wñi kvLv, cZ®cwi` Bi ntZ Abtgw` Z ntj ZvñvI AÎ Zwj Kvq Aš-f® wntmte Mb" nte|

12| wm̄tgU msi ƒY c×wZ | wmtgU m̄p̄ym̄si ƒYi Rb̄ w̄btav³ w̄el q̄,tj v w̄etePbvq ivL̄tZ n̄te t

- K| evZvm Ac̄ek̄thvM̄ K̄t̄ƒ wmtgU ƒ`vgRvZ KītZ n̄te | ƒ`vtgi Qv̄ n̄te Leak Proof Ges l qvj n̄te Dam Proof.
- L| t̄m̄Z̄t̄m̄Z̄ ƒ`vtg Ges tḡt̄S̄t̄Z wmtgU ƒ`vgRvZ Kiv hv̄te bv |
- M| ī[®] tḡt̄S̄ t̄_ƒK 300 wgt wgt DPz Kv̄Vi c̄:Udig/W̄v̄tbR Gi Dcti Ges Qv̄ t̄_ƒK b̄-bZg 1 w̄gUvi w̄bt̄P wmtgU ƒ`vgRvZ Kivi ēēv̄ KītZ n̄te |
- N| l qvj t̄_ƒK 300 wgtwgt Af̄š̄ti wmtgU m̄m̄Rtq ivL̄tZ n̄te |
- O| wmtgU 1 ē-wi Dcti 1 ē-v̄Gīt̄c 10 ē-wi Dcti Mv̄v (stack) Kiv hv̄te bv |
- P| wmtgU cvkvcw̄k 2wU tiv ev m̄wi ivLvi c̄ti evZvm Pj vP̄t̄j i Rb̄ b̄-bZg 300 wgtwgt duk (Gap) tīt̄L Avevi cvkvcw̄k 2 tiv ev m̄wi t̄Z wmtgU Mv̄v KītZ n̄te | wmtgU ōv̄t̄Ki Pl ov 3 w̄gUvi Gi mxgve× ivL̄tZ n̄te |
- Q| wmtgU h_v̄m̄ē ƒ` mḡt̄qi Rb̄ ƒ`vgRvZ KītZ n̄te |
- R| elv̄R̄t̄j wmtgU ƒ`vgRvZ Kib D̄t̄c̄ƒ|bxq |
- S| wmtgU Gi ē-wi Mv̄t̄q Drcv̄b Ges tḡqv̄ D̄Ēx̄ƒbi Zwi L_vKv ev̄Ābxq |
- T| wmtgU ē-env̄ti dv̄ō[®]im̄f - dv̄ō[®]Bm̄j - dv̄ō[®]Kb̄w̄RDg b̄m̄Z̄ Ab̄ym̄i b KītZ n̄te |
- U| wi-t̄ōm̄Ks t wmtgU wi-t̄ōm̄Ks Ac̄wi nv̄h̄[®]bq | ƒ`Zg mḡt̄qi Rb̄ wmtgU ƒ`vgRvZ Kiv Ges h_vk̄N̄0 ē-env̄i w̄b̄ōZ̄ KivB Ac̄wi nv̄h̄[®] Āw̄berh̄[®] Aē-vi c̄wi t̄c̄[®]ƒ̄t̄Z c̄ōqvRbv̄b̄hv̄qx wmtgU Re-stacking Kiv th̄t̄Z cv̄ti | G w̄el̄t̄q ev̄-eZv, tckv̄ vixZ; Ges ƒ`wqZ; w̄etePbvq Ḡtb 1 gvm Aš̄t̄ Aš̄t̄ D̄Ēgīt̄c wmtgU Re-stacking Kiv th̄t̄Z cv̄ti | Re-stacking Gi mḡq c̄ōZ̄wU ē-v̄ b̄-bZg 3 t̄_ƒK 5 evi l j U-cvj U K̄ti c̄ōZ̄evi B ē-wi Af̄š̄ti i RgvU Aē-v̄ t̄f̄st̄M̄ w̄ t̄Z n̄te |

13| wm̄tgU m̄sM̄h̄ Kib c×wZ | w̄c̄w̄c̄Avi-2003 Pvj ynl qvi ci t̄_ƒK w̄b̄w̄[®] t̄Kv̄=úvbx n̄t̄Z mivm̄wi gv̄j vgv̄j /wmtgU μ̄t̄qi m̄th̄v̄M̄ tbB | Db̄[®] t̄Lvj v ƒ`ict̄Īi (OTM) Avl Zvq A-Ab̄t̄ḡw̄ Z m̄s̄v̄ t̄Ūw̄i s̄ Gi m̄th̄v̄M̄ w̄bt̄Z cv̄ti w̄eavq RTM c×wZ̄t̄Z cZ̄[®]Kv̄t̄Ri Rb̄ c̄ōqvRbxq gv̄j vgv̄j /wmtgU μ̄q Kiv th̄t̄Z cv̄ti | GZ̄ w̄f̄b̄æmi Kvix m̄s̄v̄ (w̄em̄Av̄B̄m̄) th̄t̄n̄Z̄ wmtgU c̄wi enb̄ K̄ti bv̄ t̄m̄t̄n̄Z̄ wmtḡt̄Ui gj̄ m̄s̄k̄é dīt̄ḡkb̄ KZ̄[®] mivm̄wi c̄wi t̄kva K̄ti RTM c×wZ̄ Gi Avl Zvq c̄wi enb̄ P̄w̄³ i gvāt̄ḡ wmtgU m̄sM̄h̄ Kiv th̄t̄Z cv̄ti | G t̄ƒ̄t̄Ī m̄ev̄[®]K̄ m̄k̄t̄x̄ ēē-v̄wU w̄ber̄P̄b̄ KītZ n̄te |

14| w̄ēw̄f̄b̄æi t̄bi wmtgU m̄=ú̄t̄K̄[®]Q̄ȳ i“Ē̄c̄Ȳ[®]Z̄_” c̄wi w̄k̄ó-1 AvKv̄ti h̄j̄³ Kiv n̄t̄j v |

15| GZ̄ w̄el̄t̄q w̄ē-wi Z Rv̄vi Rb̄ t̄m̄bv̄m̄`i, B Bb̄ w̄m̄ōi kv̄Lv, cZ̄[®]c̄wi`Bi cĪ bs-1000/15/mvavi Y/B-10 Zwi L 29 tg 2008 Gi gvāt̄ḡ c̄K̄w̄k̄Z̄ ŪGgBGm G wmtgU w̄ber̄P̄b̄, m̄sM̄h̄ l ē-env̄i b̄m̄Z̄gv̄j v-2008^Ū Ab̄ym̄i Y KītZ n̄te |

This supersedes Routine Instructions No 333 of 1990.

SOME IMPORTANT INFORMATION ON CEMENT

1. What is Portland Cement? It is the generic term for fine, gray or white powder manufactured using high temperature to produce calcium silicates that, in the presence of water, will undergo hydration producing product that will bring aggregates together to produce mortar, stucco or concrete.

2. Why is it called Portland Cement? Joseph Aspdin, an English mason who patented the product in 1824, named it Portland Cement, because it produced a concrete that resembled the color of the natural limestone quarried on the Isle of Portland, a peninsula in the English Channel.

3. How is Portland Cement Made? Portland Cement is made when materials that contain proper amounts of calcium compounds, silica, alumina and iron oxide are crushed and screened and placed in a rotating cement kiln. Ingredients used in this process are usually materials such as limestone, marl, shale, iron, ore, clay, and fly ash. The kiln or the furnace resembles a large horizontal pipe with a diameter of 10 to 15 feet (3 to 4.1 meters) and a length of 300 feet (90 meters) or more. One end is raised slightly. The raw mix is placed in the high end and as the kiln rotates the materials moves slowly toward the lower end. Flame jets are located at the lower end. All the materials in the kiln are heated to high temperatures that range between 2700 and 3000 Fahrenheit (1480 and 1650 Celsius). This high heat drives off, or calcines, the chemically combined water and carbon dioxide from the raw materials and forms new compounds (tricalcium silicate, dicalcium silicate, and tricalcium aluminate and tetracalcium aluminoferrite). For every ton of material that goes into the feed end of the kiln, two thirds of a ton that comes out the discharge end, called clinker. The clinker is in the shape and appearance of marble sized pellets. The clinker is very finely ground to produce Portland cement. To control the cement's rate of hardening, a small amount of gypsum is added during the grinding process.

4. What are the Different Kinds of Cement? Portland Cement and Blended Cement.

5. Are There Different Types of Portland Cement? All Portland Cement is mainly similar but there are eight types of cement that are manufactured to meet various physical and chemical requirements for specific applications:

- " Type I is a general purpose Portland Cement that is suitable for most uses.
- " Type II is used for constructions in water or soil that contains moderate amounts of Sulphate, or when heat build-up is a concern.
- " Type III cement provides and supplies high strength at an early state, usually in a week or less.
- " Type IV moderate heat produced by hydration that is used for massive concrete surfaces such as dams.
- " Type V cement resists chemical attack by soil and water high in sulphates.
- " Type IA, IIA and IIIA are cements used to make air-entrained concrete. They have the same properties as types I, II, and III, but with the exception of possessing small quantities of air-entrained materials shared and combined with them.

White Portland Cement is made from raw materials, which contain little or no iron or manganese. These are the substances that give conventional cement its gray color.

6. What is Blended Cement? Blended Hydraulic Cements are produced by intimately and uniformly intergrinding or blending two or more types of fine materials. The primary materials are Portland Cement, ground granulated blast furnace slag, fly ash, silica fume, calcined clay, other pozzolans, hydrated lime, and preblended combinations of these materials.

What are the types of blended cement?

Type IS-Portland blast furnace slag cement

Type IP and Type P-Portland-pozzolan cement

Type I(PM)-Pozzolan-modified portland cement

Type S-Slag cement

Type I(SM)-Slag-modified Portland cement.

7. **What are the Raw Materials Used in the Manufacturing of Portland Cement?** The two main raw materials used in making Portland cement are calcareous substances like chalk, limestone, marl or shells and argillaceous elements like clay and shale that are rich in silica.

8. **What is the Difference Between Cement and Concrete?** Cement is actually an ingredient of concrete. Concrete is a mixture of aggregates and paste. The aggregates are sand and gravel or crushed stone, the paste is water and Portland Cement. Concrete is a hard, strong construction material consisting of sand, conglomerate gravel, pebbles, broken stone, or slag in a mortar or cement matrix. Concrete gets stronger as it gets older. Portland Cement is the generic for the type of cement used in virtually all concrete. Cement comprises from 10 to 15 percent of the concrete mix, by volume. In the process called hydration, the cement and water harden and bind the aggregates into a rocklike mass. This hardening process continues for years that it brings the idea that concrete gets stronger and tougher as it gets older.

9. **What does it Mean to "Cure" Concrete?** Curing is a very important step in concrete construction. When concrete has been cured properly, it greatly increases its strength and durability. Through the result of hydration, concrete hardens. It is the chemical reaction between cement and water. Hydration occurs only if water is available and if the concrete's temperature stays within a suitable range. During the curing period which is from five to seven days after the placement for conventional concrete, the concrete surface needs to be kept moist to allow the hydration process. The new concrete can be wet with soaking hoses, sprinklers or covered with wet burlap, or can be coated with commercially available curing compounds, which seal in moisture.

10. **Why is Gypsum Needed in Cement?** Gypsum plays a very important role in controlling the rate of which hardening of the cement develops. It must be controlled within the limits to make the cement a useful product in construction. Small amount of gypsum are added to the clinkers at the grinding period.

11. **Will Cement Harden in Water?** Portland Cement is hydraulic cement. It means that it sets and hardens due to a chemical reaction with water.

12. **What Causes Hardening in Portland Cement?** The compounds present in Portland Cement react with water to form a cementations crystalline structure that adheres *to* the sand and aggregate. This helps in binding the mass together and increases its strength till it becomes very hard.

13. **What does 28-Day Strength Mean?** When concrete hydrates, it hardens and gains strength. This hydration process continues over a long period of time. It occurs quickly at the outset and slows down as time passes. It would require a wait of several years before the strength of concrete can really be measured. Since this is impractical, a time period of 28 days was introduced by specification-writing authorities as the time where all concrete should be tested. In this period, a substantial percentage of the hydration has already taken place.

14. **How do you Control the Strength of Concrete?** In order to add strength to concrete, one has to add cement. The ratio of water to cement in the paste that binds the aggregates together plays a big role in controlling the strength of concrete. The higher the ratio, the weaker the concrete will be and vice versa. Every desirable physical property that you can measure will be adversely affected by adding more water.

15. **Is There a Universal International Specification for Portland Cement?** No there is no universal international standard for Portland Cement because every country has their own standard. The United States uses the specification prepared by the American Society for Testing and Material (ASTM C-150) Standard Specification for Portland Cement. A few other countries have also adopted this, however, there are countless other conditions. Unfortunately, they do not use the same criteria for measuring properties and defining physical characteristics so they can be virtually "non-translatable." The European Cement Association located in Brussels, Belgium, publishes a book entitled "Cement Standards of the World."

16. **What is setting of Cement?** When water is mixed with cement, a smooth paste is produced that remains plastic for a short time. During this period, the paste can be disturbed and remixed without injury. As the reaction between water and cement continues, the plasticity of the cement paste is lost. This early period in the hardening of cement is known as 'Setting of Cement'.

17. What is Heat of Hydration and its Significance? Hardening of cement is caused by some reactions described by the process of liberation of heat. This is referred to as Heat of Hydration. In mass concreting jobs like dams where dissipation of heat is not possible, the temperature of concrete rises. On subsequent cooling, cracks develop. Hence, it is very necessary to use cement with low. heat of hydration in massive structures.

18. Can Cement Irritate my Hands? There are some people who are more sensitive to the free lime than other people. It may cause some irritations if it comes in contact with the eyes. It also possible that cracked skin will leave you more susceptible to dermatitis.

19. Composite Cement? Portland Cement = Clinker + Calcium Sulphate. Blended hydraulic = Clinker + Calcium Sulphate + Cement. Inorganic Constituents (Composite Cement) (1 or more). Inorganic constituents - Blast furnace Slag, Pozzolanas, Natural Pozzolanas, Artificial Pozzolanas, Limestone.

20. Advantages of Portland Composite Cement in Concrete APCCC). Both PFA and slag are used in Portland Composite Cement. Percentage of SiO₂ is higher in slag, which is advantageous to gain more long term strength and ensure durable concrete.

a. Higher Strength after 28 Days. Due to slower reaction of slag & fly ash composite cement gives optimum compressive strength at 28 days, but the rate of strength development after 28 days is higher than that of ordinary Portland Cement. Composite cement performs better at higher temperature.

b. Better Resistant to Chemical Attack & Durable. Slag does not contain any C₃A. Replacement of clinker by slag & fly ash reduces C₃A content in cement & thus increase the resistance to sulphate attack. Alkali contents has been reduced in PCC concrete due to pozzalonic reaction which increase the resistance to chemical attack and thus increases durability.

c. Low Heat of Hydration. Slag is a latent hydraulic & fly ash is a pozzalonic material. Due to slower reaction during hydration process Crown Portland Composite Cement develops less heat of hydration which reduces thermal crack.

- d. **Better Workability.** Water demand of slag & fly ash is lower than that of clinker. Using the same W/C ratio PCC gives better indicates better workability.
- e. **Improved Workability.** Concrete mix Composite Cement generally requires less water. For constant slump, the reduction water demand of concrete due to fly ash in Composite Cement usually between 5 and 10 percentages by comparison with OPC mix having the same cementations materials content. PFA particle works like a ball bearing around coarse cement particles. This increase the workability of the concrete and eases placing. Decreasing water demand gives the higher strength and PFA particle in Composite Grey act like a Super plasticizer.
- f. **Minimize Bleeding.** Concrete made of Composite Cement is cohesive and has a reducing bleeding capacity.
- g. **Decreased Heat of Hydration.** Composite Cement is designed to have low Heat of Hydration. This results in lower shrinkage and curing becomes easier for you.
- h. **Chemical Resistance.** Corrosion of reinforcement is the most widespread cause of deterioration in concrete. The expansion produced by rust formation because surrounding concrete to crack & spall. Concrete mixes with Composite Cement produce lower permeable denser concrete, which does not allow penetrating water or air inside your finish concrete. So that metal reinforcements of your concrete can stay long and sturdy longer. This also supplemented with resistance to Sulphate and chloride attack.

ROUTINE INSTRUCTION NO 316/2008
DIRECT PURCHASE

1. MES can purchase stores direct from the market either by:
 - a. Contract purchase or Bazar Supply contract i.e. purchase of stores for which no foreign exchange is required and are available in local market. Purchase will be made on PG-3.
 - b. Local purchase meets occasional definite but small requirements. Which cannot be supplied by ESD MES. Stores for which there are rate contracts will not normally be purchased except at remote places e.g. at an outlying airfield.
2. Stores so purchased will be taken on charge and accounted for in the stores in Hand Ledger, Materials Register etc of the work or installation for which they are required and the cost will be debited to the work or installation Measurement of stores such as for timber will be recorded in BAFW-2261. In case of contract purchase, when the stores have been delivered and checked as per specifications, the SDO will sign the Contractor's copies of the indent and will return it to the contractor. Payments will be made monthly on a final bill BAFW-2262.
3. In cases of great urgency if a CMES, DW & CE is satisfied that the delay caused by the normal procedure would be detrimental to the public service, he may within his financial powers authorise, or carryout the local purchase of stores without first demanding them from the normal source of supply or ascertaining their availability.

Power of Local Purchase

4. Powers of local purchase under item (XI) Table 'B' of MES Regs are restricted as under:

Ser	Appointment	Amount in Tk	
		Existing	Proposed
1.	E-in-C	1,00,000/-	1,00,000/-
2.	DW & CE	25,000/-	25,000/-
3.	CMES	4,000/-	15,000/-
4.	GE	2,000/-	15,000/-

AGE/SDO (if Lt or AE) 1200/- (15,000/-) only when in sole charge of out station.

The amount shown in bold colour will be applicable after approval of MES Regulations 2008.

5. DW&CEs is competent to accord sanction to the local purchase of stationery which can not be obtained from the Stationery Depot. Request for authority for function of such local purchase should therefore, be addressed to DW&CEs and not to CAO Ministry of Defence.

Quotations

6. Quotations will be done as per PPR-2008 PG-1, Regs- 69, 70, 71, 72 & 73.

Invitation will take from of a letter which will contain:

- a. A full and clear description and the quantity of stores required.
- b. The sufficient specification, equal to well known standard or a sample held, alternatively it may be required that a sample shall be submitted with the quotation.
- c. The date by which the stores are to be supplied.
- d. The terms of supply e.g. ex-godown for Dhaka etc
- e. The date by which the quotation is required in a sealed envelope marked "Quotation for the supply of"

7. If only one quotation is received, it is in order to accept it if satisfactory. Report to superior authority is necessary if in a grave emergency it is possible to invite and accept only a single quotation (which is not a proprietary article).

8. A supplier's register with their credentials will invariably be maintained in the office concerned.

9. Quotation will be opened on or after the date given in the letter of invitation and no quotation received after that date will normally be considered. they will be opened by two officers, who will initial the quotations and will record the particulars in a comparative statement BAFW-1810, or in a quotation register ruled after the manner of BAFW-1810. The officer empowered to accept the quotation will record the acceptance in his own handwriting. Reasons for not accepting lowest tender will be recorded on quotation register by the officer in his own handwriting.

10. If the value of stores to be purchased at the rates quoted (including any additional charge such as sales tax) exceeds the financial powers of local purchase of the office, he will forward the quotations on BAFW-1840 to next higher authority for acceptance. Quotations will not be split or bring them within financial powers of acceptance by lower formations.

Supply Order

11. After acceptance of a quotation, a supply order in letter form will be sent to the supplier in which will be stated the description and quantities of the stores to be supplied, the place and terms of supply and if the rates included such charges as sales tax and the date by which the supply is to be completed. No penalty for late supply or failure to supply can be enforced but the purchaser may reject the stores if not delivered by the specified date. An extension of the specified date of supply can be sanctioned after the date has expired only by the accepting authority. If further supplies of the same stores are required, fresh quotation will be invited.

12. Payment for local purchase will normally be made after preaudit of the supplier's bill. Delay in the payment of bills leads to higher quotations or refusal to give quotation. In emergent cases, when the normal method of payment is not possible, cash payment may be made upto a maximum of Tk. 1,200/- (**15,000/-**). An imprest of Tk. 1,200/- (**15,000/-**) for making cash payments is authorised by Government. Method of purchase prescribed above will normally be followed as far as possible when emergency purchase is made by cash payment.

The amount shown in blue colour will be applicable after approval of MES Regulations 2008.

This supersedes Routine Instructions No 335 of 1990.

ROUTINE INSTRUCTION NO 317/2008
PURCHASE THROUGH DGDP

1. For stores not available from prescribed sources, indents will be prepared on Form PS-1, copies of which can be obtained from DGDP and forwarded through CMES/DW&CE and ESD (MES). On every indent the name of the project, detailed head of account and the Code No will be given. The foreign exchange required for works contracts in MES, will be segregated from the foreign exchange allotted to the provision of MES stores and will be placed at the disposal of DGDP by the E in C. Applications for issue of import licences/permits/certificates out of the amount set aside for works contracts along with the original contract documents and recommendation of respective DW&CEs will be forwarded to DGDP directly.
2. The following items on page 1 of Form PS-1 will be filled in 1,2 (if applicable) 3,4,5,9,10,11,13 to 16 & 17 (if applicable). Item 12 if it applies at all can be filled in only by ESD MES and will therefore, not filled by indentors.
3. All the columns except 10 & 11 on pages 2 & 3 of PS-1 will be filled by the indenter. The detail instruction will be issued by E in C's Branch (Works Dte) in this regard.
4. The following periods will ordinarily be taken in fixing the date of delivery under Col : 8. Cases of inordinate delay will be reported to DW & CE with full particulars of the case.
 - a. Supplies through indigenous sources....6 months.
 - b. Supplies of imported goods through local dealers ..9 months.
 - c. Supplies through purchase organisation abroad .. 8 months.
5. Whenever possible stores should not be too rigidly specified and alternatives will be given if they are acceptable. It may often, however assist the DGDP if likely sources of uncommon stores or specialised machinery or proprietary article, if known are mentioned on the indent or on a covering letter.

6. MES formations will indent on BAFW-1829 through CMES/DW&CE on the firms with whom DGDP has concluded a rate contract except POL which will be obtained by indent on supply Depots and not POL which will be obtained by indent on supply Depots and not through any rate contracts which may exist. The financial powers of MES officers to indent against rate contracts are given in Table-B MES Regulations which may be subjected to limitations prescribed in the conditions of rate contracts. It is, however, necessary that funds be available to cover the cost of the stores whether ordered for a particular work or for Divisional stock. Copies of indent will be forwarded to SFC/FC as the case pertains and in whose accounting area the indenting formation lies.

7. The foregoing instructions are subject to any special instructions, which may be issued from time to time in respect of any particular stores or rate contract by DGDP/E in C's Branch.

This supersedes Routine Instructions No 337 of 1990.

ROUTINE INSTRUCTION NO 318/2008
COST OF STORES

Adjustment

1. Consignor will send the debit vouchers duly priced by the UA with the despatch documents regarding despatch of stores to the consignee. The UAs will not wait for receipted copies of the vouchers for raising debits. These will be adjusted and compiled in the accounts of month in which the stores despatched. Discrepancies if any, will be settled as usual by readjustments.

2. Stores supplied by ESD MES/E in C's Branch (Works Dte) to projects will be debited at stock book rates whichever are applicable. These rates will exclude the cost of road transport and/or rail freight upto Div stocks for which CC/MC Notes will be used. From Div stocks the stores will be issued at Stock book Rates. Plus a certain percentage to cover handling charge (issue rate). S.B rates plus additional percentage will be fixed, issued and revised annually by CMES in accordance with para 640 to 642 MES Regs. The stores purchase Register (BAFW-2316) will be used for calculating the issue rate. MES Regs para 677, 703 and 704 also refer. For the surplus stores returned to ESD MES the cost of rail freight/road transport which will be adjusted through C.C Notes. See para 4 below also.

Demurrage/Wharfage

3. Demurrage/wharfage charges incurred due to delay in clearing Defence Stores as a results of non-availability of documents, incorrect markings etc will be debited to the head against which the store were ordered. Action to regularise any bills pending will be taken by the respective indentors. The ESD MES will however inform the ultimate consignees of the amount of wharfage/demurrage which occurred and verified by him to enable the consignees to adjust the accounts and verify in due course.

MC/CC Notes

4. All consignments will be booked on Civil Credit Notes or "Freight to pay" except cases covered by para 4 of Mil Tariff Rules such as -

RESTRICTED

- a. Specialised bridging equipment and airfield and roadway track except when consigned for use on MES works or for normal MES Divisional Stocks.
- b. Stores despatched under the orders of the E in C if it is directed that Mil Credit Notes will be used. The above will be despatched under Mil Credit Notes bearing a certificate that the stores being conveyed are not for use on MES peace works.

This supersedes Routine Instructions No 339 of 1990.

ROUTINE INSTRUCTION NO 319/2008
EXPENSE OF STORES

1. Procedure for the accounting of Expenses Stores is laid down in para 679 of the Regulations for the MES. This is required to be strictly followed.
2. For better control and check over the issue of stores to the DEL for petty repairs etc, the following detailed instructions will be put in to effect immediately by the GEs:
 - a. A separate Store-in-Hand Ledger (BAFW -2223) will be maintained in each Sub-Division for each main head of account. Where a Sub-Division is operating only one head of account, Store-in-Hand Ledger will be maintained.
 - b. NOT more than one Baby Indent Book (BAFW-2305) will be kept in use for each Store-in-Hand Ledger.
 - c. Stores required for the repairs to be executed will be carefully assessed and priced Baby Indents made out.
 - d. When the value of stores issued in a day in one Sub-Division exceeds Tk.1000.00 the indents for the day will be put up for the counter-signature of the GE on the next working day.
 - e. Each SDO will personally show his Baby Indent Book every fortnight to his GE who will sign the last counterfoil in token of his scrutiny. This is intended to enable the GE to watch that daily issues are reasonable.
 - f. Corrections in the Store-in-Hand Ledger and Baby Indent will be avoided. Where corrections are absolutely necessary these will be initialled and dated by the SDO.
3. The above instructions will equally apply to the Road Metal Register (BAFW-1809) for which a separate Baby Indent Book (BAFW-2305) will be maintained.

ROUTINE INSTRUCTION NO 320/2008
RETURN OF SURPLUS MATERIALS BY THE CONTRACTORS
PARA 668 OF MES REGULATIONS (1964) REFERS

1. It has been observed that SDOs Incharge and other MES executive staff have issued receipts to the Contractors, for stores returned to the Department after completion of a project. The stores thus received have in most cases not been taken on ledger charge or found physically unavailable during subsequent checks. Such cases have become subject of arbitration and resulted in other complications. To avoid recurrence of such instances, instructions contained in the subsequent paragraphs are issued for strict compliance.

Stores Returned to Central/Div Stocks

2. a. At a station where a Central/Div Stock exists material-at-site accounts will be maintained by the Central/Div stock and stores becoming surplus with a Contractor, after completion of a project and accepted by the GE, if these stores are serviceable and useful, will invariably be returned to Central/Div Stock through the Engineer-in-Charge.
- b. The GE concerned will inspect the stores and ascertain their serviceability and usefulness. If considered acceptable and if there is an opportunity to re-use in the same job (as now there is no scope to transfer store from one job to another) the SDO Incharge project/Engineer Incharge will prepare a convoy note and instruct the Contractor to convey the stores to Central/Div Stock, get it entered in the Gate Register and deliver them to the SDO Incharge Central/Div Stock. The steel will only be accepted if it is in commercial lengths. A representative of the SDO Incharge project/the Engineer-in-Charge will, however, invariably be present at the time of handing of stores to Central/Div Stock by the Contractor.
- c. The SDO Incharge Central/Div Stock will physically check the stores and prepare a receipt voucher in octuplicate. The pricing of such vouchers will be carried out in accordance with MES Regulations Para 668 (1964). GE concerned will countersign the voucher. The distribution of the receipt voucher will be as under:

- (1) GE One copy
- (2) Contractor One copy
- (3) Unit Accountant.....One copy
- (4) Gate One copy
- (5) Office recordOne copy
- (6) SDO concerned.....Three copies including the original for final bill.

d. The stores will be taken on charge on the respective Material-at-Site Register.

3. Stations where no Central/Div Stock exist:

a. The GE will inspect the stores as laid down in para 2 above. SDO Incharge will prepare receipt voucher for the stores acceptable to GE and take them on charge on the respective Material-at Site Register.

b. The receipt voucher alongwith the respective ledger will be put up by SDO Incharge to GE for countersignature.

c. The GE will countersign the voucher after verifying that the stores have been accounted for properly in the ledger concerned and will endorse the ledger in this respect.

d. Distribution of copies of receipt voucher will be in accordance with para 2 c above.

4. The above instructions will also be applicable for the surplus stores returned by the Term Contractors. In that case the stores will be taken on charge on stores in hand ledger of the Sub Division concerned.

5. These instructions are required to be noted by all MES Executive Staff and their acknowledgement kept on record.

ROUTINE INSTRUCTION NO 321/2008
DISCREPANCIES AND DAMAGES

1. Stores will not be taken direct to the work or used without having been formally received and issued by the stockholder. All stores will be checked on receipt by the stockholder against the convoy Note, supplier's bill challan or other document. Measurements where required will be entered in MB BAFW-2261.

2. While deficiency or damage is discovered, a verification will be made on the same day and Discrepancy Report completed and forwarded within seven days in all cases by an officer. If the stores have been properly and securely packed in strict accordance with orders, or instructions of any other orders issued by the E in C (Wks Dte) /DW & CEs and all reasonable precautions have been taken to prevent damage in transit, the D.R will be prepared in original only and will be submitted to the GE/AGE for his information. No DR will be sent to the consignor and the consignee will regularise the loss. In such cases DR. will be enfaced "Loss accepted by consignee".

3. If there is a Prima-facie case of theft, fraud or neglect, the matter will be reported to OC station who may order a court of inquiry. A departmental board of officers not connected with the care and custody of stores will be assembled to record evidence as to the condition of packages, wrappers and other packing materials and the stores received in the packages, which will be kept segregated until close of Court of Inquiry for inspection. These proceedings will be submitted as evidence at the C of I. Permission of OC station must be sought to the stores being taken in use if urgently required for works before a C of I.

4. If there are surpluses as well as deficiencies, the consignee will state in case 16 of the details sheet whether he is prepared to accept the surplus stores and if so whether he will accept them in place of some or all of the stores deficient. No DR will be used for surpluses only.

The consignee will address the consignor by letter giving the details which would otherwise be required in cases 1, 3, 5, 11 and 12 of the details sheet and will say whether he is prepared to accept the surpluses.

5. The consignor i.e. officer i/c stores or supervisor in charge on receipt of DR will investigate the discrepancies. The consignor will return one copy of the DR with his reply within seven days of the receipt of the Report. If the consignee considers the reply unsatisfactory, or if no reply is received to the reminder within reasonable time, he will report the matter to service HQ with a copy of the D.R. through usual channels, Discrepancies found in consignment from one formation of MES Wing of Service to another formation of other service will be submitted to the E in C (Wks Dte) by respective DW&CEs.

This supersedes Routine Instructions No 343 of 1990.

CHAPTER-III

ROUTINE INSTRUCTION NO 322/2008
STORES FOR MAINTENANCE
(INCLUDING WORKS ESTIMATED
TO COST LESS THAN TAKA ONE LAC)

Forecasts

1. Following forecasts are to be submitted by 5 September annually to Respective Services HQ's:

- a. POL (ASC supplies) to QMG's Br (ST-2) or Equivalent Branch of Navy/Air Force.
- b. Water purification & Refrigeration to QMG's Br (ST-6B) (See RI. 328) or Equivalent Branch of Navy/Air Force.

2. Following forecasts are to be submitted to ESD (MES):

- a. Maintenance stores (including works estimated to cost less than Tk. One lac) quarterly demands are submitted on the basis of average consumption for the same period during last three years (see RI 323 Annex - A & B).
- b. Urgent and special demands are submitted as and when required. Urgent demands are sent en faced urgent.
- c. Spare parts for Machinery & Equipments. Demands are placed directly on ESD MES as and when required (see RI No 329).
- d. Timber soft & Hard. Demands are submitted annually by 15 December.
- e. Stores against Rate contracts. The forecast is submitted by 15 December annually. The stores are purchased directly from Manufacturers for tyres, tubes, chemicals, bitumen, lamp Electric-220/230 V. Tubes light refrigerants, white sprit, Turpentine, sulphuric Acid, Phenyle etc).
- f. Cement The forecast is to be submitted half-yearly January to June and July to December, two & half months before date required. The cement is procured directly from BCIC/SKS/TCB or any other approved manufacturers or Govt agency.

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g. Forecast of stores for project (each project estimated to cost Tk. one lac or more) is submitted to DW & CE 's.

3. Copies of all annual forecasts will be endorsed to E in C's Branch where applicable.

This supersedes Routine Instructions No 347 of 1990.

ROUTINE INSTRUCTION NO 323/2008
BASIC STORES

1. It is not possible to calculate stores requirements for maintenance on the basis of (Plinth) Area as has been done in the case of Capital works (RI-314 referes). However, for minor works and abnormal repairs RI 314 may be referred as a guide for a purpose of maintenance of buildings, road installations etc, minimum basic items of stores have been worked out and are given in Annexure A & B to this R.I. subsequently it may be possible to work out quantities and cost of stores required for maintenance budget grant of a unit of Tk. one lac.
2. Following Annexures are attached to this RI:
 - a. Annex A is a basic list of stores for Maintenance of buildings and Roads.
 - b. Annex 'B' is a list of stores for maintenance of E/M & W/S Installations.
 - c. Annex 'C' is scale of Recording and Testing Instruments.
 - d. Annex 'D' is scale of Tools and plants.
 - e. Annex 'E' is scale of Drawing & Survey instruments.
3. Deficiencies against scales given in Annexure 'C', 'D' & 'E' will be met with from surpluses in other formations or demanded in forecast statement and purchased as and when funds are available.
4. These lists do not include special requirements or spare parts for Machinery, Installations and equipments, rate contract items, tyres & tubes, or forecasts submitted to ESD MES/E in C's Br (Works Dte).
5. The supply to a contractor of articles which are obtained locally by the GE can never be justified. The contractor must be made to arrange his own supply and the GE's responsibility is therefore restricted to the inspection of the quality of the stores supplied and incorporated in the work.

This supersedes Routine Instructions No 349 of 1990.

**BASIC STORES LIST FOR MAINTENANCE OF
BUILDING AND ROADS**

Ser	SDLES No	Description of stores	Accounting unit
Sub Sec-1			
1.	3547	Bitumen straight 80/100	M. Ton
2.	Niv	Plastic Bitumen-4 (PB4)	M. Ton
3.	7309	Cement ordinary	Kg
4.	Niv	White Cement	Kg.
5.	Niv	Gum Arabic	Kg.
6.	Niv	Nylon Rope	Metre
7.	Niv	Bees Wax	Kg
8.	Niv	Sand paper	Doz
9.	Niv	Yellow ocher	Kg.
10.	Niv	Formica	Sqm
11.	Niv	Coir for Mattress	Kg.
12.	Niv	Aica Aibon	Kg.
13.	Niv	Bed joint	Set
14.	Niv	Chalk powder	Kg.
15.	Niv	Cloth Malmal (Markin)	Metre
16.	Niv	Carfa	Kg.
17.	Niv	Colour	Kg.
18.	Niv	Colour Mahogany brown	Kg.
19.	Niv	Cotton	Kg.
20.	Niv	Clip for M N Set	Set
21.	Niv	Rozen	Kg.
22.	Niv	Rexin cloth	Sqm
23.	Niv	Shallock fine leaf	Kg
24.	Niv	Sofa cloth	Metre
25.	Niv	Rumee mostaki	Kg.
26.	Niv	Peg Set	Doz

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Ser	SDLES No	Description of stores	Accounting unit
27.	Niv	Coat hook	Doz
28.	Niv	Carborandum stone any No	No
29.	Niv	Fittings of Aluminium curtain rail	Doz
30.	Niv	Glass frosted	Sqm
31.	Niv	Paint Red oxide	Litre
Sub Sec-2			
32.	28051	Timber Hard under 30 cm x 15 cm	CUM
33.	28103	Timber Soft under 30 cm x 15 cm	CUM
Sec sec-3			
34.	12183	Glass clear 90 cm x 60 cm	Each
35.	29970	Washers roof Bitumen 6.35 mm	Gross
36.	24816	X-PM 38mm x 3.17 mm	Sqm
37.	29888	Wall board soft 12.70mm	Sqm
38.	29874	Wall board hard 4.74 mm	Sqm
39.	Niv	Veneered board	Sqm
Sub Sec-4			
40.	7664	Cloth Emery No 'O'	Doz
41.	18496	Polish French	Litre
42.	7661	Cloth glass No 1	Doz
43.	7669	Cloth Hessian No 2	Sqm
44.	30082	Cotton waste white	Kg
45.	9924	Distemper Green light	Litre
46.	9906	Distemper Yellow Drab	Litre
47.	9900	Distemper Drab light	Litre
48.	15314	Oil Linsed boiled	Litre
49.	15563	Paint PFU grey dark	Litre
50.	15552	Paint green dark	Litre
51.	15587	Paint PFU white inside	Litre
52.	15570	Paint PFU white out side	Litre
53.	15545	Paint PFU Aluminium GS	Litre
54.	15546	Paint PFU Black GS	Litre
55.	Niv	Distemper white	Litre
56.	Niv	Distemper offwhite	Litre
57.	Niv	Distemper rose	Litre

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Ser	SDLES No	Description of stores	Accounting unit
58.	Niv	Plastic Emulsion (Any colour)	Litre
59.	15548	Paint PFU Blue GS	Litre
60.	20166	Putty	Kg
61.	29740	Varnish oil GS	Litre
62.	Niv	Lime unslaked	Kg
63.	Niv	Crud Oil	Litre
64.	Niv	Pudlo	Kg
Sub Sec-5			
65.	8774	Cord sash cotton 6.35 mm	Metre
66.	12780	Hinges butt spring D/A 101. 60 mm	Each
67.	12787	Hinges butt steel 76.20 mm	Each
68.	12790	Hings butt steel 101.60mm	Each
69.	Niv	Hinges any size	Each
70.	15105	Nails wire 38.10 mm x 14 G	Kg
71.	15109	Nails wire 76.2 mm x 8 G	Kg
72.	24292	Screw wood steel 25.40 x 8 G	Gross
73.	24366	Screw wood steel 63.5 mm long	Gross
74.	27016	Tack cut blue 19mm	Kg
75.	14248	Lock rim reversible brass 127 mm with two keys	Each
76.	NIV	Rim lock (Any size)	Each
77.	NIV	Yale lock (Any size)	Each
78.	24112	Screw wood brass 25.4 mm x 10 G	Gross
79.	24130	Screw wood brass 38.00 mm 8 G	Gross
80.	12632	Handle door bow 127 mm to 150.4 mm	Each
81.	12705	Hasps & staples 127mm to 150mm	Each
82.	26181	Spring door helical brass 150 mm	Each
83.	5021	Bolts tower 100 mm	Doz
84.	5023	Bolts tower 150 mm	Doz
85.	NIV	Nails wire 12.70mm to 25 mm	Kg
86.	NIV	Hydraulic door closer (any size)	Each
87.	NIV	Sliding bolt brass	Doz

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Ser	SDLES No	Description of stores	Accounting unit
Sub Sec-8			
88.	821	Angle equal MS 25.40 x 25.40 x 6.35 mm	Kg
89.	829	Angle equal MS 38.10 x 38.10 x 6.35 mm	Kg
90.	837	Angle equal MS 50.80 x 50.80 x 6.35 mm	Kg
91.	849	Angle equal MS 63.50 x 63.50 x 6.35 mm	Kg
92.	857	Angle equal MS 75.00 x 75.00 x 6.35 mm	Kg
93.	1376	Bars flat MS 25.4 x 3.18 mm	Kg
94.	1414	Bars flat MS x 38.00x6.35 mm	Kg
95.	25312	Sheet MS Plain Galv 24G	Kg
96.	25006	Sheet MS Plain Corrg Galv 2.13m	Kg
97.	Niv	Bars flats 5080 x 6.35 mm	Kg.
98.	Niv	Tower bolt brass	Doz
99.	Niv	Aluminium curtain rail	Metre
100.	25040	Sheet MS corrg Galv 3.05 m	Kg
101.	25282	Sheet MS Plain Galv 16 C	Kg.
102.	18130	Plate MS 6.35 mm	Kg
103.	18172	Plate MS 9.52 mm	Kg.
104.	1952	Bars round MS 6.35 mm	Kg
105.	1956	Bars round MS 9.53 mm	Kg
106.	1960	Bars round MS 12.70mm	Kg.
107.	1964	Bars round MS 19.04 mm	Kg.
Sub Sec-9			
108.	26658	Copper strips 3.175 x 25.4mm	Kg
Sub Sec-10			
109.	11875	Gauze woven wire Mosquito proof	Sqm
110.	Niv	Gauze woven wire Plastic proof	Sqm
111.	30742	Wire MS soft 16G	Kg.
112.	30405	Wire barbed 14 G	Kg.

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Ser	SDLES No	Description of stores	Accounting unit
Sub Sec-13			
113.	7542	Cistern sectional steel 1.22m x 1.22m x 1.22m	Each
Sub-Sec-20			
114.	29030	Tubing MS Scrd 12.70 mm	Metre
115.	29031	Tubing MS Scrd 19.04 mm	Metre
116.	29032	Tubing MS Scrd 25.40 mm	Metre
117.	29034	Tubing MS Scrd 38.10 mm	Metre
118.	27372	Tee equal MS Scrd 12.70 mm	Each
119.	27373	Tee equal MS Scrd 19.04 mm	Each
120.	27374	Tee equal MS Scrd 25.40 mm	Each
121.	27376	Tee equal MS Scrd 38.10 mm	Each
122.	276772	Tee redg MS Sed 19.04 mm	Each
123.	27690	Tee redg MS Sed 38.10 to 25.4mm	Each
124.	27676	Tee redg MS Sed 25.4 to 19.04 mm	Each
125.	25764	Socket redg MS 19.04mm to 12.70mm	Each
126.	25766	Socket redg MS 25.4mm to 12.70mm	Each
127.	25780	Socket redg MS 38.10mm to 25.4mm	Each
Sub Sec 23			
128.	2187	Lav basin 55.88 cm x 40.64 cm	Each
129.	5566	Brackets Basin 30 CM	Each
130.	NIV	Stainless steel sink (any size)	Each
131.	27275	Taps pillar lav 12.70mm	Each
132.	7503	Cistern flush 9.00 Litre	Each
133.	7650	Closet Asiatic 'P' Trap	Each
134.	7657	Closet Pedestal 'P' Trap	Each
135.	24500	Seats closet with piller hinges	Each
136.	17820	Flush pipe extended 1.98 Metre	Each
137.	5555	Brackets cistern bldg into wall	Each
138.	Niv	Seats closet plastic	Each
139.	21980	Roses shower 12.70mm	Each
140.	Niv	Plug & chain for bath 44.45mm	Each
141.	Niv	Lead connection 19.04mm x 457.20mm	Each

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Ser	SDLES No	Description of stores	Accounting unit
142.	Niv	Lead connection 12.70mm x 457.20mm	Each
143.	Niv	Plug and chain for scullery 38.00mm	Each
144.	27273	Taps pillar lav Basin 12.70mm	Each
145.	Niv	European type Commode 'P' or Strap	Each
146.	Niv	Glazed tiles	Doz
Sub Sec-25			
147.	7714	Cock bib scrd 12.70mm	Each
148.	7716	Cock bib scrd 19.04 mm	Each
149.	14520	Meter water scrd 12.70mm	Each
150.	14522	Meter water scrd 19.04 mm	Each
151.	29645	Valve sluice water scrd 12.70mm	Each
Sub Sec-32			
152.	6020	Cable Electric pvc 250V. Single core 1.29mm ²	Metre
153.	6021	Cable Elec pvc single core 1.94 mm ²	Metre
154.	6024	Cable Elec pvc single core 2.50 mm ²	Metre
155.	6046	Cable Elec pvc Twin core 2.90 mm ²	Metre
156.	6069	Cable Elec pvc three core 1 mm ²	Metre
157.	7032	Cable Elec pvc single core 14.52 mm ²	Metre
158.	7036	Cable Elec pvc single core 25mm ²	Metre
159.	Niv	Cable Elec pvc single core 19.35mm ²	Metre
160.	Niv	Cable Elec pvc single core 38.71mm ²	Metre
161.	8871	Cord Elec flex 250 V single core .97mm ²	Metre
162.	8872	Cord Elec flex 250 V single core 1mm ²	Metre
Sub-Sec-33			
163.	3875	Block wood recessed circular 75mm dia	Each
164.	7647	Clips wiring medium 50.80mm	Gross
165.	9372	Cut out fuse iron clad W/P single pole 15 Amp 500 Volt BSP	Each

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Ser	SDLES No	Description of stores	Accounting unit
166.	13908	Lamp holder batten type indoor	Each
167.	13914	Lamp holder B.C with Cord grip	Each
168.	13938	Lamp non switch brass 19.04mm	Each
169.	26788	Switch tumbler indoor 250 V 5Amp	Each
170.	26792	Switch tumbler indoor 15 Amps	Each
171.	26802	Switch with fuse indoor 250V single pole with neutral link 15 Amps	Each
172.	26806	Switch with fuse link 30 Amps.	Each
173.	Niv	Socket outlet 5 Amps 3 pin	Each
174.	25944	Socket outlet 15 Amps 3 pin	Each
175.	Niv	Plugs outlet 5 Amps 3 pin	Each
176.	18438	Plugs outlet 15 Amps 3 pin	Each
177.	8566	Conduit tubing 19.04 mm	Metre
Sub-Sec-34			
178.	13988	Lamp Elec 15 Watts	Each
179.	13991	Lamp Elec 40 Watts	Each
180.	13992	Lamp Elec 60 Watts	Each
181.	13994	Lamp Elec 100 Watts	Each
182.	11023	Fans Elec ceiling 1.22mx1.42m sweep	Each
183.	11052	Fan Elec Table 30 CM to 45 CM sweep	Each
184.	24544	Shades conical enamelled 25 CM to 8.89	Each
185.	12746	Heater water 22.50litre 230/250 V (geaser)	Each
186.	Niv	Heating element for heater	Each
187.	Niv	Chain brass for hanging tube light	Metre
188.	24548	Shades ventilated 27.50 to 33 CM	Each
Sub Sec-51			
189.	9849	Diamond glazier for CM sheet glass	Each
Sub Sec-53			
190.	1148	Axes felling 1.82 Kg	Each
191.	1153	Axes felling Helves	Each

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Ser	SDLES No	Description of stores	Accounting unit
192.	1294	Barrows wheel GS.	Each
193.	14085	Gloves clear Hurricane lamps	Each
194.	14080	Lamp Hurricane	Each
195.	25426	Shovels GS Mk-III	Each
196.	25431	Shovels Helves 67 CM	Each
197.	14463	Machine weighing platform with wts 500 kg.	Each
Sub-Sec-23			
198.	Niv	Soap dish best quality	Each
199.	Niv	Towel rail best quality	Each
200.	Niv	Grating CP/CI	Each
201.	Niv	Chain with handle for flush pipe	Each
202.	Niv	Guard rail with glass.	Each
203.	Niv	Domestic gas burner	Each
204.	Niv	Injector nozzle for gas burner	Each
205.	Niv	Spring for gas burner	Each
206.	Niv	Gas valve	Each
207.	Niv	Commercial gas burner	Each
208.	Niv	Bath mirror	Each
209.	Niv	Mixture tap for basin	Each
Sub Sec-32			
210.	Niv	Capacitor 1.5 M F D for ceiling fan	Each
211.	Niv	Filter element of Air Conditioner	Each
212.	Niv	Glove for electric lamp with gallery	Each
213.	Niv	Glass for water tight bracket	Each
214.	Niv	Wooden batten teak wood.	Meter
215.	Niv	Heating element with thermostate switch for water geaser	Each
216.	Niv	Electric regulator for ceiling fan	Each
217.	Niv	Wooden board for electrical work (various size)	Each

Note : Stores which are not included in the Basic list of stores will be arranged by GE/AGES through Bazar supply contract/Local purchase as & when required on receipt of N.A certificate from ESD MES.

**BASIC STORES LIST FOR MAINTENANCE OF
E/M & W/S INSTALLATIONS.**

Ser	SDLES No	Description of stores	Accounting unit
Sub Sec-4			
1.	30080	Cotton waste Coloured	Kg.
2.	11430	Fire bricks Std 22.86 x 11.43 cm x 7.5cm	Each
3.	11452	Fire clay	Kg
4.	25662	Soap yellow 453 gm	Each
5.	25511	Skins chamois leather	Each
6.	25975	Soda caustic	Kg.
7.	29209	Jute packing medium	Kg
8.	30310	White lead dry	Kg.
9.	20380	Red lead jointing dry	Kg.
10.	7329	Chalk prepared white	Box
11.	7247	Cannvas khaki waterproof Gd 'C' 91m	Metre
12.	Niv	White spirit	Litre
13.	2920	Turpentine oil	Litre
14.	Niv	Phenyle	Litre
Sub Sec-9			
15.	26658	Copper strip 25.40 x 12.70 mm	Kg.
16.	17913	Lead piping low pressure 38.10mm x 9 Kg.	Metre
17.	17908	Lead piping high pressure 12.70 x 4.50 Kg	Metre
18.	13310	Metal white GP-1	Kg.
19.	13308	Tin Ingot	Kg
20.	14144	Lead pig commercial	Kg
21.	1894	Copper round 12.70 mm	Kg
Sub Sec-10			
22.	21868	Rope steel wire 25.40mm Circumference	Metre

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Ser	SDLES No	Description of stores	Accounting unit
Sub Sec-22			
23.	9013	Manhole cover round 50 CM x 75 kg	Each
Sub Sec-28			
24.	9498	Cutter pipe 3 wheel type 12.70 mm to 50.80 mm	Each
25.	9488	Cutter pipe link type 50.80 x 150.40 mm	Each
26.	28430	Tools screw cutting 12.70 mm to 50.00 mm	Each
27.	29802	Vice pipe 6.35mm to 100.00mm	Each
28.	30842	Wrench stillson 25.40 CM	Each
29.	30850	Wrench stillson 0.92m	Each
Sub Sec-31			
30.	12335	Gloves rubber 12.70 CM x 27.94 CM	Pair
31.	12332	Gloves Electrician Rubber left Hand	Each
32.	12333	Gloves Electrician Rubber Right Hand	Each
33.	27274	Line Tape	Each
Sub Sec-38			
34.	15326	Oil Transformer & switch gear	Litre
Sub Sec-41			
35.	27057	Tape Empire varnished 19.04 mm	Metre
36.	27063	Tape Insulating adhesive 19.04mm	Kg.
37.	7676	Cloth insulating cotton empire 0.177mm	Kg.
38.	3926	Compound cable jointing	Kg.
39.	Niv	Abnoite MT loaded sheet unpolished 12.70mm.	Kg.
40.	Niv	Sheet abonite 1.6mm	Kg.
Sub Sec-42			
41.	13500	Packing Rubber Insertion & canvas sheet 3.17mm.	Kg.
42.	13508	Mill board asbestors 1.50mm	Kg.

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Ser	SDLES No	Description of stores	Accounting unit
42.	15361	Packing asbestors graphited self lubricating 9.50mm	Kg.
43.	15471	Hemp greased round 9.50mm	Kg.
44.	13900	Rope asbestores 12.70mm	Coil
45.	14146	Lead yarn	Kg.
46.	28852	Tubes boiler steel 100 kg 38.10mm x 3.43mm	Kg.
47.	Niv	Jointing HY limit 1.50mm	Kg.
Sub Sec-32			
48.	Niv	Fluorescent tube 220/230 volt 40/20W	Each
49.	Niv	Holder for fluorescent tube	Each
50.	Niv	Choke coil for fluorescent tube	Each
51.	Niv	Starter for fluorescent tube	Each
52.	Niv	Combine switch socket 5 Amp/15 Amp 3 pin/2 pin	Each
53.	Niv	Electric bell AC/DC 220/230 V	Each
54.	Niv	Miniature circuit bracket 220/250 V	Each
55.	Niv	Acid for Battery	Litre
56.	Niv	Bearing for ceiling fan	Each
57.	Niv	Rawl plug	Doz
58.	Niv	Dry Cell 1.5 volt	Each
59.	Niv	Balanced lamp 160 watt without choke coil	Each
60.	Niv	Bulk head fittings	Each
61.	Niv	Mercury lamp 220/250 volt	Each
62.	Niv	Halogen lamp 500/1000 watt	Each
63.	Niv	Choke coil for mercury lamp	Each
64.	Niv	Capacitor 2.5 MFD for ceiling fan	Each
65.	Niv	Cable electric PVC 500 volt/sheathed/non-sheathed	Metre
66.	Niv	Plastic sheet	Each
67.	Niv	Rechargeable hand torch	Each
Sub Sec-20			
68.	Niv	Rubber coupling for water pump	Each
69.	Niv	Bucket lather No 6 for hand tubewell	Each

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Ser	SDLES No	Description of stores	Accounting unit
Sub Sec-20			
70.	Niv	Seat valve no 6 for hand tubewell	Each
71.	Niv	Piston rod for hand tubewell	Each
72.	Niv	Plunger for hand tubewell	Each
73.	Niv	Nipple GI	Each
74.	Niv	Union socket GI	Each
Sub-Sec-44			
75.	458	Alum	Kg.
76.	Niv	Bleaching powder	Kg.
Sub Sec-46			
77.	2416	Belting balata 4 ply 100 mm	Metre
Sub Sec-51			
78.	5765	Bushes steel wire 63 mm x 177 mm	Each
Sub Sec-56			
79.	Niv	Lagging low temp Insulation cork slab 50mm	Sq meter
80.	Niv	Air conditioning unit 1 Ton yr round operation AC	Each
81.	20523	Refrigerator 8 to 10 cft AC at 1050 BTU	Each
82.	Niv	Cold storage 5 ton capacity Elec at 24000 BTU	Each
83.	14546	Gas methylchloride	Litre.
84.	11667	Gas Freon-12	Litre
85.	Niv	-do- - 22	Litre
86.	712	Gas Ammonia Anhydrous	Litre
87.	Niv	Liquid chlorine Anhydrous	Litre
Sub Sec-58			
88.	3A40	Hose flexible petrol 6m x 38mm	Each
89.	4A16	Joining petrol resisting 3.17 mm	Each
90.	6F03	Boxes junction Intersection 19.04 mm	Each
91.	Niv	Conduit saddle 19.04 mm flame proof	Each

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SCALE OF RECORDING AND TESTING INSTRUMENTS

Ser	SDLES No	Description of stores	Scale per GE/AGE
SCALE 'A' (For GE/ME and AGE/AME)			
1.	40/580	Ammeter switch Board AC/DC 300 Amp	1 No
2.	46/1193	Avometers Universal 46 Range No 1 MK-II	1 No
3.	40/2208	Batteries Dry Torch MK-1	2 Nos.
4.	38/2232	Battery charger Rectifier in put 220/230 V Max DC output 5 Amps at 6 or 12 volts.	1 No
5.	53/1237	Balance spring 15 kg	1 No
6.	40/27870	Bridge Magger No 3 MK-II	1 No
7.	51/3917	Blow lamp inclined burner two pint	2 Nos.
8.	51/7205	Calliper inside 100 MM	1 No
9.	51/7207	Calliper inside 150 MM	1 No
10.	51/7226	Callipers outside 125 MM	1 No
11.	51/7227	Calliper outside 150 MM	1 No
12.	51/7229	Calliper outside 300 MM	1 No
13.	44/Niv	Chloroscope 0.1 to 1.5 PPM	1 No
14.	51/Niv	Crank shaft, alignment indicator (suitable for 75mm to 300mm in crank web spacing)	1 No
15.	40/Niv	Clips for lamp aiming	2 Pairs
16.	40/30892	Cells dry for batteries torch MK-1	12 Nos.
17.	40/1186	Cases carrying leather for Avometers	1 No
18.	40/27871	Cases carrying sling for Bridge Meggers	1 No
19.	40/13416	Electric soldering iron	1 No
20.	40/14490	Frequency Meter 40-60 Cycles.	1 No
21.	51/11767	Gauges Feeler 100mm blade .97mm to 6.45	1 Set

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Ser	SDLES No	Description of stores	Scale per GE/AGE
22.	51/11769	Gauges Feeler 100m x 250mm blade .97mm to x .38mm	1 Set
23.	46/Niv	Gauge Mercer 25mm x 300mm to read 0.97	1 No
24.	40/13206	Hydrometer Secy, cell	1 No
25.	34/14079	Lamp Hand Inspection flame proof 60 watts	1 No
26.	46/13293	Indicator speeds for RPM.	1 No
27.	51/14166	Level sprit 300 mm	1 No
28.	51/31274	Micrometer outside 25 mm	1 No
29.	51/31275	-do- 25.50mm or 50.80 mm	1 No
30.	51/31276	-do- 50.80 mm -75mm.	1 No
31.	51/31277	Micrometer out side 75-100 mm	1 No
32.	51/31278	Micrometer out side 100-125 mm	1 No
33.	51/31279	Micrometer out side 105-150 mm	1 No
34.	51/31272	Micrometer inside 50-300 mm	1 No
35.	40/27862	Megger insulation & earth continuity tester	1 No
36.	58/Niv	Pressure gauge testing apparatus	1 No
37.	40/Niv	Phase tester	1 No
38.	40/Niv	Photometer	1 No
39.	1/22018	Sule steel 150mm	1 No
40.	51/22022	Sule steel 30mm	1 No
41.	40/Niv	Recording volt meter AC/DC-O-500V	1 No
42.	31/12332	Rubber Glove Electrician 11 KV left hand	6 Nos.
43.	31/12333	Rubber Glove Electrician 11 KV right hand.	6 Nos.
44.	31/2580	Safety Belt line man	1 No
45.	51/Niv	Sing Thermometer (Hygrometer)	1 No
46.	51/Niv	Square combination with protector head 300mm	1 No
47.	51/26570	Straight Edgs steel 60 CM	1 No
48.	51/26571	Straight Edgs steel 120 CM	1 No

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Ser	SDLES No	Description of stores	Scale per GE/AGE
49.	40/Niv	Sub standard voltmeter, Ammeter and watt meter combined.	1 No
50.	40/Niv	Sub standard watt hour meter AC	1 No
51.	40/Niv	Sub standard meter DC	1 No
52.	51/27902	Thermometers laboratory 0-220 F-23	3 Nos.
53.	52/27238	Tape Measuring metallic woven 15 meter	1 Case.
54.	40/516	Tong test Ammeter 200 Amps.	1 No
55.	51/26981	Tachometer Hand 4000 RPM	1 No
56.	40/28455	Torches Hand MK 1 with bulb 4V 3 cells	4 Nos.
57.	40/29811	Voltmeters AC/DC portable 50C 250 V	1 No
58.	58/Niv	Vaccum Apparatus	1 Set
59.	40/14540	Watt-Hour AC/400V50 Amps.	1 No
60.	52/30089	Watch stop 1/10 second	1 No
61.	40/27866	Tester Insulation 0-100 Megohms 500V No2	1 No
62.	51/Niv	Crank shaft alignment indicator (Suitable for carank web spacing 75mm to 300mm)	1 No
63.	53/1238	Balance spring of 100 Kg	1 No
64.	51/27902	Thermometer laboratory C-220 F	3 Nos.
65.	38/28596	Transformer current	1 No
66.	38/Niv	Transformer potential	Pumping Staion 01 No
67.	53/Niv	Horrocks Box	1 No
68.	53/Niv	Turbidity meter (wher raw water is filtered)	1 No
69.	44/18076	Testing outfit chlorine.	1 Set

SCALE OF TOOLS & PLANTS**Note:**

1. 10% of total requirements of T&P will be kept as reserve in Engineer Machinery Park.

Ser	SDLES No	Description of stores	GE	AGE	CMES
Sub Sec-17					
1.	3838	Blocks chain GS 10 ton	1	1	-
2.	Niv	Carco Model 'J' 30.47 Meter wire rope Hook clevis.	1	1	-
3.	13449	Jack lifting & traversing Hydraulic 30 Ton MK 1 GS.	1	1	-
4.	30325	Winches crab Hand 5 Ton	1	1	-
Sub Sec-34					
5.	Niv	Obstruction light 75W GEC Cat ZA 742	1	-	-
6.	11590	Flood lights general purpose 1000 Watts	1	1	-
7.	Niv	Beacon light GEC Cat ZA 503 complete with transformer 250/100 V step Dn 3 KV	1	-	-
Sub Sec-37					
8.	11906	AC Gen Set E/D 400/230 V 3 ph 50 C 15 to 20 KVA	1	1	-
9.	11903	AC Gen Set E/D 400/230 V 3 ph 50 C 50 to 100 KVA	1	-	-
10.	14736	Elect Motor AC 3 ph slip ring induction 400 V, 50C, 1450 RPM to 15 HP.	1	1	-
Sub Sec-38					
11.	Niv	Automatic voltage Regulator 11000 V	1	-	-
12.	28712	Power transformer 3 ph 50C II KV 400-230 V 100 KVA	1	-	-

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Ser	SDLES No	Description of stores	GE	AGE	CMES
13.	Niv	Battery charging rectifier 200/230 VAC 50 C 10 KW	1	1	-
Sub Sec-43					
14.	30915	Pump set centri AC 400 3 ph 50C 1200 GPH 100 Mhd	1	1	-
15	30967	Pump E/D sewage Unchokable 3000 GPH 15 meter hd	1	-	-
16.	30904	Pump E/D 24000 GPH hd 100 meter hd with accessories.	1	1	-
Sub Sec-46					
17.	17972	Plant spraying paint portable E/D or M/D	1	1	-
18.	17978	Plant washing Hydroforce E/D 2 Gun or M/D	1	1	-
Sub Sec-48					
19.	30113	Plant welding high presure OxyACC	1	1	-
20.	30118	Plant welding Elec with accessories E/D or M/D	1	1	-
Sub Sec-61					
21.	28574	Tractor with pneumatic tyres 25 HP Fordson type	1	1	-
22.	41010	Crawler tractor class I bare			
	a. 41032	Angle Dozer			
	b. 41026	PCU 2 Dram rear mounted		One set Unit	
	c. 41030	Winch complete with cable			
23.	41388	Scrapers towed 9.00 Cu Meter Class-I	1		- -
24.	41391	Scrapers towed 4.50 Cu meter class-III		1	- -
25.	9094	Crane mobile 5 Ton.	-		1

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Ser	SDLES No	Description of stores	GE	AGE	CMES
26.	41290	Excavator ½ or 3/8 cy			
	a. 41291	Jib			
	b. 41292	Bucket (Drog Line)			
	c. 41293	Crane hook 5 ton			
	d. 41294	Grab		one unit	
	e. 41295	Shoval attachment			
	f. 41297	Trencher attachment			
	g. 41298	Pile driving attachment			
27.	41205	Roller sheeps foot with removable teeth	1	1	-
28.	41200	Crawler tractor clark (Air borne equipment)	1	1	-
29.	41344	Grader Motor FWD 3.65 M mould board	1	1	-
30.	41345	Bull Dozer	1	1	
	a. 41349	Roller	1	1	
	b. 41250	Loader 75 CM belt	1	-	-
Sub Sec-62					
31.	42174	Mixer concrete IC E/D .40/.28 Cum.	2	1	-
32.	42173	Mixer concrete IC E/D 28.20 Cum	4	2	-
33.	42150	Mixer Asphalt protable .28 Cu metre	2	1	-
34.	42082	Dumpers 2.25 cu. Meter	2	1	-
35.	42121	Heaters, Bitumen 1125/ 1350 Liter with pump & spray	3	2	-
36.	42330	Sprayer Asphalt 1350 Liter	3	2	-
37.	42283	Road rollers diesel 10/12 Ton with Scarifiers	2	1	-
38.	42281	Road rollers Diesel Scarifiers 4 Ton	1	1	-
39.	42002	Granulator stone portable E/D with loading platform	1	-	-
40.	42054	Creusher stone portable	1	-	-
41.	42160	Mixer Asphalt Barbar Green	-	One unit	

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Ser	SDLES No	Description of stores	GE	AGE	CMES
42	Niv	Movile Truck & lab van soil testing with Eqpt & versa Tester CBR, Fd or lab	-	One unit	
43.	Niv	Paving Machine	1	-	-
44.	Niv	Concrete finishing Machine (Pavar)	1	-	-
45.	Niv	Cement grouting machine	1	-	-
46.	Niv	Model C 363 Melipper Concrete saw 36 HP petrol	1	1	-
47.	Niv	Floor Polishing Machine	2	1	-
48.	51/Niv	Brass cased theromometer upto 500 F	3	2	-
Sub Sec-63					
49.	44501	Concrete Breaker pneumatic No 2 climax	1	-	-
50.	42012	Compressor, Air Trailer mounted 2.54-4.38 Cum pneumatic	2	1	-
51.	a. 44101/03	Vibrators concrete with handle	4	2	-
	b. 43022	Lubricator Air line MK I		One Unit	
	c. 43506	Hammer Drils Pnaumatic No Holman			
	d. 43538	Hose pneumatic 19.05 MM Mk-II 60 Meter.			
	e. 43270	Concretor pneumatic hose 19.04 mm in MK-II			
	f. 43313	Drill steel for pib Bits 22.24mm x 19.04 m x 100 CM long 50 Nos			
	g. 43102/04/06/08	Bits detachable Rip bits cruciform 38mm, 44mm 63.50 mm 6 Doz			
	h. 43162/64/66	Bits detachable chisel 38MM 44M, 50MM 4 Doz			
52.	NIV	Horiz earth boring machine			

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SCALE FOR MATHEMATICAL & SURVEY INSTRUMENTS

Ser	Description of Instruments	SS 52 SDLE S No	Scale			
			E in C DW& CE	CMES	GE	Out Station AGE
1.	Arrows	1080	10	10	20	10
2.	Banderols 2.44mm wood	1292	10	10	20	10
3.	Barometer, Aneroid , 75mm	1411	1	1	1	-
4.	Binoculars prismatic No2	3446	1	1	4	1
5.	MK-III					
6.	Boards Drawing Autiquarian 137 Cm x 83 Cm	4083	1 Per SD	1 Per SD	1 Per SD	- Per SD
7.	Double elephant 106 Cm x 73 Cm	4071	1 Per JD	1 Per JD	1 Per JD	1 Per JD
8.	Box, Developing	5305	2	1	1	1
9.	Cameras	7231	2	-	-	-
10.	Chains Measuring 30.47 metre MK II	7441	2	1	4	1
11.	Chartometers	7367	1	1	1	-
12.	Clinos Indian MK V	7601	2	1	4	-
13.	Clinos Pendent	7600	1	1	2	-
14.	Compasses, Beam 130 CM MK II	7915	2	1	1	-
15.	Compasses, prismatic 100 CM	7921	1	1	4	1
16.	Compasses, Magnetic plantable MK-II	7919	2	1	4	1
17.	Covers, Web, Plane, table portable MK II	9051	2	1	4	1

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Ser	Description of Instruments	SS 52 SDLE S No	Scale			
			E in C DW& CE	CMES	GE	Out Station AGE
18.	Curves, Drawing, French,	9349	6	1	1	1
19.	Frams, Daylight printing, large 140 Cm x 80 Cm	11663	2	1	1	-
20.	Small 140 Cm x 80 Cm	11664	2	2	2	1
21.	Glasses, Copying 110 Cm x 80 Cm	12073	1	1	1	-
22.	Magnifying Head 10 Cm	12303	2	2	1	1
23.	Measuring 226 gram	12305	1	1	1	1
24.	Instruments drawing sort, Sets.	13323	1 Per D	1 Per D	1 Per D	1 Per D
25.	Levels pocket MK IV	14160	1	1	1	-
26.	Levels, 24 CM I P	14161	1	1	1	1
27.	Telescopic, precise	14173	1	-	-	-
28.	Machines Drafting	14335	3	-	-	-
29.	Machines reproduction Electric	14411	1	1	-	-
30.	Mortar and pestel	14673	1	1	1	1
31.	Oil stone	26550	2	1	1	-
32.	Pantographs 0.75 Meter	15581	2	2	1	-
33.	Pens, Ruling, Jointed Nib	15613	1	1	1	1
34.	Plates, stencil MES Draughtman No 1 sets.	18309	2	1	1	-
35.	Rulers, parallel Rolling 45 CM MK II	22931	6	2	2	-
36.	Rules, Architects 60 CM 4 fold	22013	4	4	20	6

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37.	Rules sights 45 CM MK II	22015	2	1	4	1
38.	Rules sights 25 CM MK III	22017	6	1	1	-
39.	Rules slides 50 CM/ Calculator		-	16	16	10
40.	Scales Architects, Universal	22293	1 Per D	1 Per D	1 Per D	1 Per D
41.	Scales, Mathematical No 1 Boxes	23300	1 Per SD	1 Per SD	1 Per SD	1 Per SD
42.	20 CM 30 CM 42 CM 80 CM 160CM to mile in box boxes	23301	1 Per SD	1 Per SD	1 Per SD	1 Per SD
43.	Scales weighing 200 gm with wts	23302	1	1	1	1
44.	Setsquare cellulaid 15 CM 45 ⁰	24507	1 Per D	1 Per D	1 Per D	1 Per D
45.	15 CM 60 ⁰	24508	1	1	1	1
46.			Per D	Per D	Per D	Per D
47.	25 CM 45 ⁰	24509	1 Per D	1 Per D	1 Per D	1 Per D
48.	Set squares, Celluloid	25506	1	1	1	1
49.	Adjustable 20 CM		Per Hd			
50.	Staves pocket level MK IV	26229	1	1	1	-
51.	Staves pocket level MK IV	26359	1	1	1	-
52.	Staves, levelling 4 metre	26374	4	2	8	1
53.	Steroscope, Universal	26541	1	-	-	-
54.	Straight Edges 120 CM MKII	26578	2	2	2	-
55.	Tables, Plane, portable MK II	26979	2	1	4	1

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Ser	Description of Instruments	SS 52 SDLE S No	Scale			
			E in C DW& CE	CMES	GE	Out Station AGE
56.	Tapes Measuring Metallic woven					
	15.23 Metre	27238	3	4	20	2
	15.23 Metre Taps	27243	3	4	10	1
	30.47 Metre	27242	3	4	20	2
	30.47 Metre Taps	27244	3	4	10	1
57.	T-Square Mahogany, with edge 144 cm	27311	1 Per SD	1 Per SD	1 Per SD	-
58.	Levelling Instrument	-	-	-	3	2
59.	T-Square Mahogany, with edge 112 CM	27309	1 Per JD	1 Per JD	1 Per JD	1 Per JD
60.	Theodolities, Transit 12/50 CM IP	27882	1	1	2	-
61.	Thermometers, Max & Min	27903	1	1	1	1
62.	Tripods, plane, table, portable MK-II	28801	2	1	4	1
63.	Umbrella, Survey 150 CM dia	29229	3	2	5	1
64.	Watch stop 1/5 second MK II	30085	1	1	-	-

Note:

1. Until arrangements are made for repair to Drawing & Survey instruments by EME, the present system will continue and formations concerned will forward to the Deputy Director Map Publication, Survey of Bangladesh all such instruments requiring repair, with a report showing defects in each. Repair charges will be adjusted by book debit.

2. 10% Reserve may be held by the formations over and above authorised scale.

ROUTINE INSTRUCTION NO 324/2008
DIVISIONAL STOCKS

Object

1. The primary object of a Divisional stock is to provide stores normally required for maintenance, minor and major works, abnormal repairs and renewals but it is intended as a secondary object to include stores for projects (Capital works) also. Divisional stocks are intended to hold stores and plant for final issue to works or installations. Any stores and plant required for issue on local or hire will be purchased for, and will be held i.e stores as T&P see annexure 'D'. to RI No 323. Divisional stocks will be recouped i.e. stores to replace those issued will be demanded or purchased at intervals as per authorised Maximum limits laid by CMES.

Formation

2. The CMES is the authority competent to sanction the formation of a Divisional stock for GE/AGE and DW & CE to the formation of a central stock for a CMES.

Duties

3. Normally one storeman should be authorised for every 200 items of stores held of value not exceeding Tk.5 lacs. The F/S Organisation/ Establishment and duties of staff officers, SDO's and storeman in charge of stores are laid down in MES Regs para 97, 103, 112, 628 & 638 and may be elaborated further by respective DW&CEs.

Maximum and Minimum

4. The authorised minimum is the stock level at which it is necessary to demand or order further supplies and the authorised maximum is the authorised minimum plus the quantity of stores normally consumed during the period between demands, including the time it takes to receive the stores e.g. if three months elapse between the preparation of an indent and the arrival of stores and it is desired to order stores quarterly then the authorised minimum and maximum will be 3 m kg & 6m kg respectively where M kg is average monthly consumption. These limits are fixed by the CMES and the DW & CE's will review annually maximum monetary limits of all divisional or Central stocks under the control and intimate E in C's Br (Wks Dte) accordingly, Para 625 MES Regs also refer.

Stores for Major Works

5. No account will be taken of stores for these small projects to fixing authorised maximum and minimum. They will be demanded at the same time as stores required for recoupment of Divisional stocks, proper and in the case of stores for ESD (MES) in the same quarterly demands. They will be accounted for in separate stock Registers and they will be stored separately from Divisional stocks properly. Balances of these stores will be taken into account when preparing quarterly demands. Accounting of stores for abnormal repairs which may even cost over Tk. one lac will be dealt with in stores in hand ledger as it involves only one folio normally. Para 650 & 679 MES Regs refer.

Stores for Capital Works (Projects)

6. With the object of avoiding delay in starting capital works of simplifying accounts and of reducing the number of material account or of swollen stores in hand ledgers which would otherwise be necessary, it is recommended to demand and hold in Divisional stocks, without allotment of funds as in the case of Major works (small projects) stores which will be required for works costing Tk. one lac or over, referred to as projects. It is necessary before demanding stores for projects that the work shall have been administratively approved or that it should be known that administrative approval is about to be given, it is not encouraged that stores should be demanded and accumulated in case they might at some time be useful. MES Regs 320 & 646 to 652 refer.

This supersedes Routine Instructions No 351 of 1990.

ROUTINE INSTRUCTION NO 325/2008
BOOKING OF EXPENDITURE ON ACCOUNT
OF STORES RECEIVED

1. The ESD MES/E-in-C;s Br, (Works Dte) or DGDP etc will raise a debit and expenditure will be booked in the Construction Account of the Divisional stock on account of the cost of stores which includes carriage up to Divisional stock against respective sub-heads of each service. The cost of handling and operation charges in Divisional stocks will be met by adding one percent in the issue rate of stores which will be readjusted annually on the basis of actual expenditure incurred.

2. If the stores to be despatched differ in description and/or quantity from what are shown on the stock ledgers, action will be taken by the consignor to amend the ledgers. He will under no circumstances prepare false consigning documents and expect the consequent discrepancy report to be regularised by the consignees.

This supersedes Routine Instructions No 353 of 1990.

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ROUTINE INSTRUCTION NO 326/2008
SURPLUS STORES

1. CMES and DW & CEs will order the transfer of any stores which may be available among surplus within their areas Ex-Divisional and central stocks respectively. At the same time they will amend the demands and amend the surplus lists. The E-in-C will order the transfer on inter service basis or instruct to ESD MES Wks Dte for disposal if not required by any services.

2. This supersedes Routine Instructions No 355 of 1990.

ROUTINE INSTRUCTION NO 327/2008
COAL & COKE

Storage

1. Coal and cokes should be stored in bins or in regular stack showing its dimension and the quantity in it. The top surface in bins and outside faces of stacks from which issues are not being made should be whitewashed as a precaution against pilfering. In checking bins or stacks, they should occasionally be broken into, to checking that the interior does in fact consist of coal or coke and not less valuable substances.

Measurements

2. Although consignments are always given by weight, checking is necessarily nearly always done by measurement. Checking of consignments received by rail should be done on the ground and not in the wagon, since coal and coke, especially small and slack coal, compact while in transit, and if checked in the wagon a loss would be shown which in fact has not occurred. When coal is received from a source of which the number of cubic meter per ton is not known, it will be established and recorded for future reference by weighing one ton building it into a rectangular stack and measuring the stack. A conversion table is given below as a guide from various sources.

3. The measurement of coal will be calculated at one cum per ton.

This supersedes Routine Instructions No 357 of 1990.

ROUTINE INSTRUCTION NO 328/2008
CHEMICALS FOR WATER PURIFICATION &
REFRIGERATION

1. The under mentioned chemicals will normally be obtained through rate contracts. If there is no rate contract, local purchase will be made which may include any other items not mentioned below:

- a. Ammonia (anhydrous)
- b. Carbon dioxide.
- c. Chlorine
- d. Liquid Chlorine.
- e. Freon
- f. Methyl Chloride
- g. Sulphuric Acid
- h. Sulphur dioxide

Where applicable, Gas cylinders should be returned immediately to avoid heavy rent to suppliers.

2. Bleaching powder is ASC supply through QMG's Branch (ST-6 B) and will be intended on from BAFZ-2184-B.

3. The undermentioned chemicals will be included in quarterly demands on ESD MES.

- a. Alum (Usually in the form of alumino ferric).
- b. Ammonium sulphate.
- c. Calcium Chloride.
- d. Sodium chloride (In the form of rock salt).

This supersedes Routine Instructions No 359 of 1990.

ROUTINE INSTRUCTION NO 329/2008
SPARE PARTS & TYRES FOR PLANT,
MACHINERY & MOTOR TRANSPORT

Spare Parts

1. Spare parts for plant and machinery will be demanded from ESD MES on revised Form BAFW-2322 or BAFW-2402 as under:
 - a. Spare parts for plant and machinery held against scales of T&P and which has been standardized except for types of which sufficient numbers do not exist to justify the holding of stocks of spare parts centrally.
 - b. Spare parts for motor vehicles which have been standardized for use in the MES.
 - c. Complete assemblies for 4th line repair of certain MT Vehicles, other than those referred to in b above.
2. Spare parts for any installed plant including ice making and refrigerating plant, refrigerators, air conditioners, fans, electric and water meters will be indented on DGDP through ESD MES and also those not available with ESD MES vide above para or in urgent cases by local purchase if within indenter's financial powers.
3. Spare parts may be classified special, proprietary parts & Accessories of Common user parts, as the case may be.

Tyres

4. Tyres (covers and tubes) for plant, machinery & vehicles of not common user type will be demanded in BAFW-1829 on firms designated in DGDP rate contracts for sizes included in the contracts, Other sizes as required will be demanded on special indent in BAFW-2402 on ESD MES. This indent will be signed by AE E/M, GE/AGE or CMES. If tyres are not available their local purchase will be resorted to.
5. Tyres may be stored :
 - a. Upright in racks
 - b. Stacked in heaps
 - c. Stacked in pyramids

6. Inner tubes will not be folded flat, they may remain in the original containers as received or partially inflated and suspended over a saddle.

Rubber Articles Storage Precautions

7. As far as possible articles made of rubber will be stored in a cool dry and dark place and will be kept free from contamination by petroleum products. French chalk is to be dusted on tubes and rubber rings.

This supersedes Routine Instructions No 361 of 1990.

ROUTINE INSTRUCTION NO 330/2008
STORAGE

Storage Plan

1. Store yards will be divided for storage purposes into areas corresponding to the section of the SDLES, clearly demarcated by signboards. Following points will be considered in the plan:
 - a. Ease of access to road and rail service, if any for each section. The heavier stores to be stacked as near rail service or road as possible.
 - b. The segregation of inflammable stores by the interposal of groups of non inflammable stores.
 - c. Requirements of covered and leak proof accommodation for stores subject to deterioration due to exposure/rain or liable to pilferage. POL & highly inflammable paints must be segregated in separate buildings.
 - d. Adequate accommodation, centralisation & Security fence.

Stacking.

2. All stores will normally be counted and stacked as received. Dunnage will be used both for keeping stores off the ground as well as between tiers to facilitate lifting.

Preservatives

3. Non preservation of stores results into unserviceability and eventually loss to the state. Certain stores must be treated with preservatives such as paint etc to safeguard them from deterioration due to climate effects.

Security

4. It is the responsibility of OC station to provide escorts on transfer of machinery. For security of stores in installation Appx-13 of S.T.I (Stores Technical instruction) No D/3 as revised refers.

Packing & Handling

5. For packing and Handling reference may be made to E in C's standing orders for ESDs and STIs.

This supersedes Routine Instructions No 363 of 1990.

ROUTINE INSTRUCTION NO 331/2008
REPLACEMENT - OF ELECTRIC BULBS

1. No bulb without an MES mark will be issued.
2. Consumption of bulbs by units, etc will be carefully scrutinized and steps taken to investigate any excess consumption. The life of an incandicent bulb is about 800 hours which for normal domestic use means a life of appox eight months. Replacement of 100 percent annually may therefore, be considered reasonable. (Ref: AHQ E-in-c's Br Policy ltr no 400/16/E-4 dt 08-01-1994)
3. All worn out bulbs received from Units etc and individuals will be destroyed in the presence of an official not below the rank of an SDO E/M as nominated by the CMES. A suitable rectangular box and a mallet with a rectangular head fitting the box will be kept for breaking bulbs without danger to the operator. All brass recovered will be disposed of in normal procedure.
4. Records of receipts from stock, issues to units, departments and individuals and destruction of worn out bulbs will be entered on BAFW-1773 (loose leaf book with serial numbered sheets) These will be reviewed by the GE periodically.
5. Ordinarily replacement issues will be made at the store. But they may be made through wiremen. Loose leaves of BAFW-1773 will be given to shift wiremen for replacements. These are to be returned when the sheet is full and inserted in the folder.
6. Wireman taking bulbs out for replacement are forbidden to surrender new bulbs unless they receive an unbroken bulb of equal wattage in exchange branded with the MES mark, or a signed receipt from the occupant for the issue of the bulb without exchange, in which case the occupant will be charged as for barrack damage.

This supersedes Routine Instructions No 369 of 1990.

ROUTINE INSTRUCTION NO 332/2008
STORES RECOVERED FROM DEMOLITIONS

1. Store recovered from demolitions include all stores, plant and materials recovered from complete demolitions, from additions and alterations, repairs and renewals to buildings and installations and also materials salvaged from repairs and overhaul to machinery but not spare parts and metals from machinery condemned para 690 (i) & (ii) of MES Regs refer.
2. The quantities of stores recovered will be ascertained and recorded in the demolition Register BAFW-2200 as soon as the work of demolition is completed or in stages if demolition work is spread over a month or so.
3. As soon as practicable after the stores have been entered in the demolition Register, they will be inspected by the SDO who will order their transfer to stores in Hand ledgers except for those which are required for immediate re-use in the same work and those which he considers to be worthless. The latter will be inspected by the GE or his AGE and if he agrees he will order them to be buried spread at site, burnt or otherwise disposed of. The SDO will then record in the Demolition register the quantities dealt with in different ways and the GE (or AGE) will sign the demolition Register. All this will be completed within one month of the stores having first been recorded in the demolition Register.
4. Stores recovered from demolitions and brought to account in stores, in Hand ledgers will not be permitted to accumulate and remain indefinitely in stores. Except for those which may have been earmarked for use in a specific work and have been transferred to the stores-in-hand ledger pertaining to that work, they will be inspected by the GE (or AGE) at convenient intervals, which will on no account exceed three months.
5. The GE (AGE) will take following further action:
 - a Decide which stores (if any) are not sufficiently serviceable for re-use and are to be disposed of by sale to authorised persons or by public auction, burying, burning etc as may be appropriate. The sale value before auction must be over 5% of value assessed by GE and is to be authorised by CMES. These decisions will be confirmed before they are put into effect on a Transfer expense voucher (BAFW-2253) sanctioned by the competent authority.

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- b. Order those Stores which are likely to be of use on maintenance works within the Division during the next twelve months to be retained on the stores-in-hand ledger. /these stores will not be used on new works without specific approval of DW&CE.
 - c. Report the remaining stores to CMES. The value of such stores will not be taken into account for the purpose of valuing the stores held on the stores-in-hand ledger at the end of the month. Para 679 (i) of MES Regs refers.
6. CMES will take action in respect of the stores reported to them in the similar manner as surplus stores on closing of a project. Stores will not be taken on Div stocks or returned to ESD MES on payment without the prior sanction of DW & CEs of respective services.

This supersedes Routine Instructions No 365 of 1990.

ROUTINE INSTRUCTION NO 333/2008
MARKING OF STORES

Brands and Stamps

1. The system employed will be such that the mark cannot easily be defaced or counterfeited without detection, thus:
 - a. Manufactured articles will be deeply stamped on main members.
 - b. Building materials, when it is necessary to inspect these before delivery e.g. wood scantling will be stamped or branded with a device which cannot easily be counterfeited and which will be changed at intervals.
 - c. Constructional stores will not be marked.
2. Brands and stamps will be kept locked up by an individual made personally responsible for them.
3.
 - a. Before disposing of manufactured articles, particularly those recovered from demolitions (RI 365 and MES Regs 692 refer) GEs will satisfy themselves that there is no danger of their being substituted for serviceable articles of similar pattern either before or after sale. The brand or stamps vide above para will be defaced by a reversed broad arrow (→) together with the addition of any other distinguishing mark considered necessary and particulars thereof will be entered in the demolition register.
 - b. If there is any doubt whether these safe guards are sufficient to prevent fraud articles with very little remaining life will be broken up and sold as scrap or retained for repair purposes.
4. The following classes of articles will receive marks as shown against each in addition to any other identification marks on T&P as are laid down. The MES number of fans and meters as given in the Fan & Meter Register BAFW-2181 will, however be repeated in the stamping even if printed on for ease in reading, If fans and Meters are unserviceable or awaiting disposal, precautions will be taken as outlined above and the particulars will be entered in red on BAFW-2181.

5. Care must be taken that delicate instruments are not damaged in stamping. Where possible, manufactures of these will be asked to undertake the stamping, during assembly, stamps being lent to them or to ESD MES for that purpose if necessary.

Ser	Particulars	Stamps or Brand
(a)	(b)	(c)
1.	Hand and portable machine tools (Portable machinery and plant including vehicles, ladders etc) Porttable electrical apparatus except fans and meters instruments of all kinds	M A S I E
2.	Fans and Meters -----	M A S I E
3.	Furniture (See also para 26 of furniture pamphlet	M A S I E Yr and month of provision M A S I E
4.	Electric bulbs (to be etched chemically on the glass by the supplier).	M A S I E

Service Marks

6. In order to avoid mixing up stores of various services, the following service marks will be shown on all six sides of the packages of defence stores consigned to ESD MES.

- a. Ordnance Green disc.
- b. Ordnance Factories Green triangle
- c. Engineers Brown triangle
- d. Transportation Buff star
- e. ASC supplies Blue Trifoil
- f. Medical Red Cross.

- g. (1) Farms Miscellaneous stores
 and marked white.
- (2) Publications
- h. BAF Blue Diagonal

7. The front and any other side of the package will show following particulars :

- a. Front side Consignee
- Package No
- Contract No
- Indent No

- b. Top or one side Gross weight.....
- Measurement
- Consignment No

Or

Leading Mark

8. In case of bundles, rolls and loose packages, a like wise plate showing service identification colour/marks etc as given above will be properly stitched/attached to them.

This supersedes Routine Instructions No 367 of 1990.

ROUTINE INSTRUCTION NO 334/2008
LOSSES IN STORES

Powers of Write-off

1. Powers of write off of losses of stores vide Rule 73 of F.R part I have been liberalized and pertaining to MES are tabulated below:

POWERS OF WRITE OFF LOSSES OF STORES (RULE 73 OF FR PT I)

Ser	Appointment	Losses not due to theft fraud or neglect	Losses due to theft fraud or neglect	Remarks
1.	E in C	37,500/-	7,500/-	MES authorities should not be asked to hold any Deptl Court of Inquiry to investigate into MES losses. Fin Regs part-I Rule 70 to 73 refers.
2.	Div/Area Comd	37,500/-	7,500/-	
3.	Sta/Brigade Comd	3,750/-	2,500/-	
4.	DW & CE	1,250/-	500/-	
5.	CMES	250/-	-	

Authority: MOD letter no AA-1/89/D-1(Part-2)/529 Dated 10-03-2008 & AHQ, AG's Branch Pay, allowances & Accounts Directorate letter no 3859/2/Bevahi-3 Dated 13-03-2008.

2. Losses due to theft, fraud or neglect will be investigated under order of the Bde/Sta Comd or equivalent, as the case may be loss statements accompanied by the proceedings of the court of inquiry will be submitted to Div/L of C Sub Area Comd or equivalent, who can sanction losses within his powers in consultation with his financial adviser. Losses exceeding his powers will be submitted by him with his remarks to respective DW&CE through the SFC/FC concerned for Govt orders. This does not apply to formations directly under E in C's control in which case Div/L of C Sub Area Comd or equivalent will submit the case to AHQ, E in C's Branch through local audit officer concerned. They have no powers to sanction losses under this category.

3. Losses not due to theft, fraud of neglect will be accompanied by the discrepancy report, stock taking report or other relevent documents and

the proceedings of the Court of inquiry if one has been held through SFC/FC concerned and submitted to Div/L of C Sub area Comd or equivalent who can sanction losses within his respective powers in consultation with his financial adviser. Formations directly under E in C's control will submit the cases directly to the E in C through local audit officer. The E in C will process cases exceeding powers of Div/L of C sub Area Comd or equivalent for MES units and formations not directly under the control of the E in C will be forwarded by them to respective DW&CE through SFC/FC concerned for Govt. orders.

4. The following channel of correspondence will be adopted:
 - a. Army
GE/AGE/CMES/Sta HQ/Log Area/Div HQ/ DW& CE/Govt.
 - b. Air Force
GE/AGE/CMES/BASE HQ/DW&CE/Air HQ/Govt.
 - c. Navy
GE/AGE/CMES/NOIC/DW&CE/NHQ/Govt.

Procedure

5. The Ministry of Defence have to justify the writing off of large sums of money before the Public Accounts Committee. The following procedure is therefore to be observed by services HQ in submitting such cases to Ministry of Defence.
 - a. A statement of reasons giving in detail why it has been found necessary to write off the amount should accompany each proposal.
 - b. It should also be clearly stated if a Court of Inquiry has been held and with what result, reasons being given if a Court of Inquiry has not been found necessary.
 - c. If responsibility for the loss etc can be fixed on an individual disciplinary, legal or other action taken against him should be stated. If no such action can be taken, the reason thereof should be given.
 - d. Recoveries if any made from the defaulters, should be indicated.
 - e. Time taken in the finalisation of a case and reasons for undue delay, if any should be stated.

f. In case proper scrutiny should be made with a view to taking remedial action to prevent recurrence of such losses etc, the exact action taken or proposed to be taken should also be stated.

6. In certain cases, as detailed below the branches concerned of Services HQ will present the information in the form of a statement of case to be prepared in triplicate and included in the file as an enclosure when the case is submitted for the orders of Govt. The statement of case should be self-contained and should contain requisite details as per para 5 above so as to serve eventually as a brief:

a. Cash losses, over payments and irrecoverable claim etc

(1) Due to theft, fraud or neglect, Net value exceeding Tk. 2500/- in each case.

(2) Due to other causes-Net value exceeding Tk. 5000/- in each case.

b. Stores losses-Damages through negligence.

(1) Due to theft, fraud or neglect, Net value exceeding Tk. 5000/- in each case.

(2) Due to other causes-Net value exceeding Tk. 15000/- in each case.

c. Ex-gratia payments exceeding Tk. 20,000/- in each case.

d. Infractionous expenditure including demurrage charges in excess of Tk. 10,000/- in each case.

e. Loss of documents, non-maintenance of books and records and losses, etc to which no precise monetary value can be assigned.

7. If the statement of case is accepted by Min of Def (Finance Divn) the file will, before issue of Govt orders, be sent to the Deputy Financial Adviser concerned who will remove one copy of the statement of case. In the case of the Army, Air & Navy the file will be shown to Deputy Financial Adviser who too, will retain one copy of the statement of case.

The statement of case will be approved by the Director PSO/or similar rank of other service.

This supersedes Routine Instructions No 371 of 1990.

CHAPTER-IV

ROUTINE INSTRUCTION NO 335/2008
ACCOUNTING OF STORES

1. Accounting of stores should be in accordance with paras 670 MES Regulations in particular paras 645, 647, 650, 652 and 661 to 667 refer. To simplify accounting and control, it is indented to merge Material-at-site Account with Divisional stocks.

Construction Account

2. The following will be entered as expenditure (and liabilities where required under the rules) in the construction account BAFW-2242.

- a. The cost of store, including stores required for the preservation of stock.
- b. Railway freight (where applicable from Div stock to site) and carriage.
- c. Wages of labour employed in connection with the handling custody and preservation of stocks including loading of vehicles employed on the removal of issues.
- d. The cost of labour, freight and other expenses incurred transferring surplus stores to other stocks.

3. The following will not be entered as expenditure: they will be debited to the items of the project estimate mentioned in each case.

- a. The cost of buildings, fencing, land etc for storage purposes (To be debited to contingencies, which may with the sanction of the competent authority be increased, if heavy expenditure on building is necessary).
- b. The salaries etc of store men (To be debited to establishment).

4. The following will be entered as Credits:

- a. The value of stores issued to the works at the issue rates in force on the date of issue.
- b. The value of stores transferred to other works or other stocks at the rate appropriate.

- c. The actual price received from the sale of surplus stores.
5. The value of stores shown as issue in the Material Register (BAFW-2225) in order to adjust losses will not be shown as credit in the construction account.

Supervision

6. Unless separate and independent organization is created SDOs B/R & E/M will not be tied on stores accounting in connection with works projects at the cost of exercising adequate supervision of works.

This supersedes Routine Instructions No 341 of 1990.

ROUTINE INSTRUCTION NO 336/2008
STORES ACCOUNTING & INSPECTION
(MES REGS PARA 720 TO 771 AND 675 ALSO REFER)
ACCOUNTING UNITS

1. Accounting units and sub units are tabulated below:

Ser	A/C Unit	A/C Sub Unit	A/C Unit	A/C Sub Unit
1.	M. TON (Mks)	Kilogram	Doz	No
2.	M. TON (Mks)	Decimal of a TON (MKs)	Gross	Doz
3.	M. TON (Mks)	to 2 places in case of stores such as bitumen etc	Quire	Sheet
4.	K.G	Gram	-	-
5.	Litre	C. Litre	-	-
6.	C. Litre	M. Litre	-	-
7.	Cu Metre	CU C.M	-	-
8.	Sq Metre	Sq C. Metre	-	-
9.	Kilometre	Metre	-	-
10.	Metre	centimetre	-	-
11.	Centimetre	Milimetre	-	-
12.	C. Nos	No	-	-

2. In preparing Receipt Advice Notes or receipt Vouchers, the weight conversion figures and table given in SDLES will always be used, irrespective of the source from which the stores have been received and the quantities will be shown accordingly to the authorised units and sub units given in SDLES calculated to the nearest sub unit. Steel will however be received and issued at actual scale weight.

Example

3. 300 KG of MS sheet 16 BG weighting 12.46 Kg/sqm are demanded. They are available in sizes 3.04m x 0.914m only. The weight of one sheet is 34.69 kg. Then the number of sheets required in in order to weight not less then 300.00 Kg is 9, of which the weight is 312.21 kg. Thus, 9 sheets will be issued and quantity shown as issued will be 312.21 kg.

This supersedes Routine Instructions No 375 of 1990.

ROUTINE INSTRUCTION NO 337/2008
PERMISSIBLE TOLERANCE ON STORE AND ACCOUNTING

1. One of the reasons for delay in settlement of contractors final bills is the time taken by the executive and audit authorities in the verification of stores issued under schedule 'B' with those actually required on the basis of calculations for the design and specification adopted. Generally, one of the following two conditions arises:

- a. Stores have been issued in excess of the computed quantities.
- b. Stores have been issued short of computed quantities.

2. The plus or minus variations are shown below as "Permissible Tolerance" on specified weight. These variations will be ignored in assessing excesses or shortages. See Note 2 in the remarks column of table below also.

Table Showing Permissible Tolerance on stores.

Ser	Name of Material	Permissible Tolerance	Remarks
1.	Portland cement	1%	Cement quantities to be calculated as per MES schedule of rates 2007
2.	Burnt Bricks	3%	Bricks to be calculated at 406 per Cubic metre of masonry.
3.	Steel plates upto 152.40 cm wide :-		The weight of plates shall be calculated
	a. 4.76 mm to under 6.96 mm thick	5%	on the basis that steel weights.
	b. 6.94 mm to 12.70mm thick	2½ %	199.17 kg per 25.4 mm of thickness
4.	Flat bars all thickness	2 ½ %	
5.	Sections other than joints:		
	a. Up to 3.43 mm thick b. Over 3.43 mm thick	5% 2- ½ %	The weight of section and bars shall be calculated on the basis that steel weights.

RESTRICTED

Ser	Name of Material	Permissible Tolerance	Remarks
6.	Joists all thickness	2- ½ %	0.239 kg per sqcm.
7.	Round, Rivet or Sq bars		Note I: Total rolling Margin
	a. Upto 9.53 mm dia thickness	5%	percent of steel should be taken twice the permissible.
	b. Over 9.53 mm dia thickness	5%	Tolerance percentage.
8.	M.S sheet all gauges	5%	
9.	M.S bolts, Nuts etc	5%	
10.	ACC sheet & ridges	5%	Calculations to allow for laps.
11.	Timber (when supplied in scantlings or planks in available sections and lengths).	10%	This percentage excludes conversion losses from logs and sleepers to scantlings and planks etc
12.	Bitumen fibre, limpet or embossed washers.	5%	
13.	Expanded metal, fly or Mosquito wire netting.	5%	Note. 2 : All structural steel will be received and issued by the MES at the actual scale wight “instead of” Conversion weight “To ensure that the steel supplied conforms to the requisite specifications, it will also be checked against conversion weight in SDLES of BSS taking into consideration the permissible tolerance percentage as given in this table.

RESTRICTED

Ser	Name of Material	Permissible Tolerance	Remarks
14.	Binding wire for reinforcement	2%	
15.	Bitumen tar coal or other road surfacing Dressings	5%	
16.	Steam or slack coal	5%	
17	Oil paints and varnishes	5%	
18.	C.I pipe upto 50 MM dia	5%	

3. When steel is demanded, it will always be stipulated on the indent or supply order that the invoice will show the number of pieces, their dimensions and the weight of the steel supplied. If the preparation of loss statement becomes necessary, then the loss will be reckoned as the difference between the weight invoiced and the weight received.

4. a. Where MS bar round or any steel rolled in Bangladesh is found below BSS, tolerance may be fixed by following as under:

- (1) In case of contracts concluded by DW&CE and CsMESby CMES.
- (2) In case of contracts concluded by GEs ...by GE.
- (3) In case of contracts concluded by AGEs...by AGE.

b. In case of GEs & AGEs etc though the tolerance will be fixed by them, they must inform their respective CsMES of the extra percentage fixed in each case.

c. In all cases issues are to be paid by the contractor by scale weight irrespective of whether it is within tolerance limit or not.

This supersedes Routine Instructions No 377 of 1990.

ROUTINE INSTRUCTION NO 338/2008
PACKING MATERIAL - ACCOUNTING

Account

1. Account will be required for:
 - a. Containers for holding stores in stock
 - b. Despatch of surplus stores.
 - c. Issue of loose stores to a limited extent.
 - d. Despatch of stores to out stations.

Ledger

2. It will not be necessary to maintain more than one packing materials ledger but it will be permissible to do so, if the circumstances justify it. No packing material register will be maintained for stores in hand small material at site accounts.

Grading

3. The packing material will be graded as serviceable and not required. Serviceable packing materials are those materials which are fit for immediate use as packing materials though not necessarily in the same manner as used on receipt. For example a gunny bag may not be fit for re-use as such but if it is fit for use as, say, padding, it will be regraded as serviceable. Wooden cases etc which have had one end or side or top removed will be regraded as serviceable even if the part removed has been broken in opening the case or crate and so on.

Record

4. A record will be kept at each place where packing materials are received or used daily. No record will be kept for 'Unserviceable' or not required materials. 'Serviceable' materials only received with the consignment of stores will be recorded on the back of the relevant receipt advice Note or on the back of transfer receipt Voucher. The record will then be entered in a blank register with numbered pages divided into columns showing, date, description, quantity and reference to the relevant Receipt Advice Note. The latter column will also be used for the words "Conditioning" or freed from stores as appropriate and for recording the Source it received from another stock holder.

5. The materials will be transferred to the packing materials Register at the end of each month by means of a transfer Receipt voucher. Interim transactions if necessary are permitted.

6. A transfer issue Voucher for the unwanted quantities will be prepared in duplicate and will be submitted to the GE who will enter on it his orders for disposal in accordance with normal rules for stores found unserviceable.

7. If it becomes necessary 'Not required' materials may be conditioned in order to make 'Serviceable materials no record of the quantities of not required materials, need be kept but the serviceable materials so obtained will be entered in the record. It is not necessary to preserve and list such items as card board cartons wrappers of electric lamps and the like.

Issues and Receipts

8. Stores held on stock will be drawn on indent BAFW-2274 (Baby indent, BAFW-2305 in the case of Material at site Account) and will be taken on the packing Materials ledger. Stores obtained from other sources will be taken on the packing materials ledger by means of a Transfer Receipt Voucher. At the end of each month, the quantities consumed will be found by checking balances in hand with those shown in the packing materials ledger. A transfer issue voucher will be prepared on the authority of which the quantities consumed will shown as issued in the ledger Containers issued with stores will be recorded on the reverse of those copies of the relevant indents which are forwarded to the UA and retained in the Divisional stock.

Containers will normally be described thus to show capacity as well:

- a. Barrels, bitumen 200 litres.
- b. Cases, wood, packing, up to 0.028 cu-metres.
- c. Cases, wood, machinery 3.04 m x 1.45 x 1.22m
- d. Drums, steel 181.84.227.30 litres
- e. Drums oil 22.73 litres
- f. Chlorine gas 45.35 kg bottles/Cylinders

Packing Material Issued to Contractor

9. Empty containers including jute bags issued as packing material with stores to contractors will not be returned back by them.

Special Packing Material

10. Special packing material, required to be returned to suppliers for refilling must be returned as soon as they are empty to avoid heavy rental charges. A special packing material register which will be prepared locally will be maintained for this purpose. For containers for which rental is charged, entries will be made separately showing identification mark or number.

Principles of Accounting

11. No packing materials of whatever classification will be held as such on stock ledgers or registers. Special packing Material ledgers will be maintained for those materials, which are serviceable.

12. Packing materials while in use for holding stores in stock will not be borne on charge in packing materials ledgers. When no longer used for this purpose they will be taken on charge in the ledgers.

13. All containers borne on charge in packing Materials ledgers and utilized in the issue of stores will be shown on the convoy Note.

14. No packing materials of whatever classification will be entered on issue or receipt vouchers for other stores as separate items.

15. Packing materials recovered from stores received and not utilized to hold stores, will be taken on charge in packing materials ledgers, and all packing materials held on charge in packing Materials ledgers and utilized in the issue of stores will be struck off charge by means of transfer receipt issue vouchers at convenient interval. Transfer of packing materials from the charge of one individual to another will also be done by means of transfer receipt/issue vouchers.

Cost of Packing Material

16. The cost of all materials issued from stock for use as packing materials will be debited to respective head in each MES wing of service.

17. No debits will be raised or credit afforded to heads of account or packing materials used in the issue of stores. When issue rates from Div stocks or from Material-at-Site accounts of projects are fixed the cost of packing materials will be taken into account.

This supersedes Routine Instructions No 379 of 1990.

ROUTINE INSTRUCTION NO 339/2008
ISSUE OF STORES TO CONTRACTORS
(PARA 661 TO 670 MES REGULATIONS ALSO REFER)

1. Control over issue of stores to contractor is exercised by:
 - a. Basic list of stores incorporated in the time & progress chart. The issue of stores must be restricted against the physical progress shown in the chart.
 - b. An unstamped dated acknowledgement BAFW-1826 by contractor detailing full particulars of the materials issued to him including the recovery rates and total value, chargeable to him. The USAR (unstamped receipt) will be priced and posted in the construction account.
 - c. Statement of store issued to the contractor prepared vide certificate III (c) to BAFW-2262 on completion of works.

2. Following proforma is used for preparing statement of store issued to contractor:

Statement of store issued to Contractor

Job _____

Contract No _____ Dated _____

Final Bill No _____ Dated _____

Ser	Description of store	Issued under schedule	Estimated No to be issued on orig schedule & Dev orders
a	b	c	d

Actual issue	Incorporated in the work and converted to waste	Returned to MES store	Retained by Contractor
e	f	g	h

3. Basic list of stores is a quantitative list of stores to be issued under a contract before it is let. The estimated quantities will include provision of waste for store issued under sch 'B'. This Basic list of stores must be

agreed with the contractor and signed by him before the work order is given. As the contract is amended or deviated the basic list of stores should be amended accordingly.

4. The phasing of issues of stores to contractor will be planned in time & progress chart. This T&P chart must be agreed with contractor before work order is given.

Over and Under Issues

5. Over issue of stores to contractor shows lack of control of work. Stores are issued to contractor for incorporating in the works. The contractors action in retaining/irregularly disposing the stores surplus to incorporation may be considered as amounting to theft. Claims will be raised against the contractor for recovery on the basis of market rates or rates fixed by the CMES comparable there to.

6. Under issue really means receipts not taken from contractor at the time stores were handed over. Where it is due to incomplete accounts recovery is claimed from the contractor or the full quantity of schedule 'B' stores required for execution allowing suitable wastage factor. The basis of recovery is on schedule 'B' Rates.

7. Over issues or under issues are likely to go for arbitration. Hence it must be ensured that recoveries are sound and calculations of recoveries must be preserved.

This supersedes Routine Instructions No 381 of 1990.

ROUTINE INSTRUCTION NO 340/2008
PREPARATION AND CLEARANCE OF ISSUE VOUCHERS

Avoiding Delay

1. In order to expedite the preparations and clearance of issue vouchers in general and in the raising of debits on account of stores issued to works in particular following procedure will be observed:

a. The despatch of issue vouchers unpriced whether or not a debit is to be raised in order that the accounting for the stores shall not be delayed by an unavoidable delay in pricing.

b. The provisional acceptance of the issue vouchers by the consignee when a discrepancy requires to be referred to the DW & CE for a ruling in order that the accounting for what may be a considerable quantity of stores need not be delayed by a dispute over what may be a very small proportion of that quantity.

Distribution of Issue Vouchers

2. a. Copies of Issue vouchers will be prepared for distribution as under:

- | | |
|---------------------|--------------------|
| (1) Copies 1, 2 & 3 | To consignee |
| (2) Copies 4 & 5 | To unit Accountant |
| (3) Copy 6 | Office copy |
| (4) Copy 7 | to DW & CE/E in C |
- when issue are made at his order.

b. All issue vouchers will be despatched to the consignee and to the UA within four days. No vouchers will be priced before being distributed.

c. Immediately on receipt of copies No 4 & 5 of the issue voucher the UA will proceed to price them. The consignor will immediately pass one copy to the UA, who will price it from copies No 4 & 5 U.A will forward this copy to the consignees U.A in support of the debit. He will return copy No 5 to the consignor, so informing him that the debit has been raised and will retain copy No 4.

3. If there are discrepancies that matter will be settled by correspondence, awaiting any further action which will also be necessary

in order to regularise the loss. Where the matter can not be settled by correspondence, the dispute will be referred to DW&CE for ruling, meanwhile the consignee will mark the issue voucher in red ink on the top of right hand corner “Provisionally accepted” and follow normal routine.

4. If the consignee is to regularise the deficiency, he will address a memorandum to the consignor requesting him to delete the endorsement "Provisionally accepted" and he will cancel endorsement on his own copy. This will end the matter.

5. If the consignor is to regularise the deficiency, he will either despatch the quantity of stores found deficient, or will prepare a "minus" issue voucher which will be endorsed “Adjustment of issue voucher no dated vide (Consignee) D.R. No dated and DW&CE/EinC letter No dated “The “minus” issue voucher will be prepared distributed and subsequently dealt with in the same way as a normal issue voucher, if the issue of stores was to work, the consignor’s U.A will raise a minus debit against the U.A of the consignee.

Issue Voucher Register

6. All MES formations will maintain a Register of Issue Vouchers, rulled in the form given below:

Register of Issue Vouchers

Convoy Note		Issue Voucher		Consignee	Date of Issue Voucher sent to		Date of Issue Voucher Received		Issue to work only Date Pr/Vr Record from UA
No	Date	No	Date		Consignee	UA	Record from consignee	Sent to UA	
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(j)	(k)

7. Return of outstanding issue Vouchers will be submitted yearly to the DW&CE to reach him by 1st Oct. The return will include issue vouchers outstanding for more than three months, of which CsMES have failed to obtain receipted copies. The number of reminders issue in each case will be shown in the remarks column of the return. The form of the return is given below:

RESTRICTED

Return of outstanding issue vouchers for the year ending 20 in respect of Consignor.

Ser	Issue Voucher		Name of Consignee	Ref to Demand No & date and designation of demander	Date of Issue Voucher sent to consignee	DR if any raised by consignee	
	No	Date				No	Date
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)

Remarks

1. Ref to RO No & date
2. Consignees latest Ref
3. Brief description of store.

This supersedes Routine Instructions No 383 of 1990.

ROUTINE INSTRUCTION NO 341/2008
SOME AUDIT OBJECTIONS ON STORES ACCOUNTING

Credit Notes

1. Whether stores are to be despatched by goods or passenger trains is not indicated on military/civil credit notes. Sanction of the CFA is also not obtained as required by Army Regs Rules (i) Rule 692.

MES Accounts Vouchers

2. Transfer vouchers are not prepared in respect of transfer made within sub-Divn, but entries are made in the ledger giving reference to the page No of the ledger from which transferred. Every entry in a ledger is required to be supported by a proper voucher.

3. The quantity of stores consigned is not taken in full in ledgers as shown on the vouchers as required by MES Regs para 639.

4. Baby indents are not prepared at the time and on the dates of issue of store as required by MES Regs para 678.

5. The name of the work to which the stores are issued and consumed is not being given in the baby indents as required by MES Regs 679. para 675 etc

Store Ex-Demolition

6. Worn out fittings etc and material obtained from demolitions are not being taken on charge in the Demolition Register promptly as required by MES Regs para 690. These are left over for months or till it is brought to notice by the audit.

Stores Nomenclature etc

7. Stores of one category are transferred to another without preparing any transfer voucher duly signed by the GE.

8. Stores are transferred from demolition to store-in-hand ledger in excess of requirements, MES Regs para 679 refers.

9. Stores are declared unserviceable without survey report by the competent authority.

10. Nomenclature of stores are changed without proper sanction. MES Regs para 205 and 675 refer.

11. Periodical stock verification is not being carried out as required by MES Regs para 675 etc

Furniture

12. Sanction for the issue to officers of Civil Depts or non military depts is not obtained from the competent authority.

13. Expense vouchers are prepared in parts to bring the amount under the financial powers of the GE in contravention of the provisions of MES Regs para 208.

Construction Accounts

14. Summary of folios pertaining to same code head is not maintained.

15. Cost of stores issued to contractors is not posted in the contractors accounts soon as they are issued.

16. Contractor's column is not completed with the result that the balance in contractor's Accounts do not agree with those in the contractor's ledger.

17. Liabilities are generally omitted to be noted. Where noted they remain outstanding for a considerable time. MES Regs Appx 'L' and instructions printed on BAFW-2242 refer.

This supersedes Routine Instructions No 385 of 1990.

ROUTINE INSTRUCTION NO 342/2008
STOCK TAKING AND INSPECTION

Scope

1. This order is applicable primarily to Divisional stocks and to Materials Account, to Divisional stocks and to Materials Account, to stores held on Packing Materials Registers and on stores in-hand-ledgers such as those of large E&M Installations, where the quantities of stores held are such that they are held in physical charge of a subordinate other than the subordinate in charge of the installation, work etc In the case of smaller quantities of stores held on stores in hand ledgers, repair materials lying at the road side etc, the principles will be applied according to the circumstances of the case.

Definition

2. The terms mentioned below will, whenever they are used here, be understood to have the meanings given opposite to them.

a. "Stores" includes all kinds of plant, machinery, spare parts, instruments, packing material and T&P except furniture and T&P which will be verified as laid down for furniture in E in C's furniture pamphlet 1961.

b. "Stock holder" includes any store keeper or any subordinate of any rank or grade who has the immediate charge of any kind of stores.

c. "Stock Register" includes T&P and Furniture and Materials at site Registers and stores in Hand ledgers.

d. "SDO" Means the Sub-Divisional Officer to whom the stock holder is responsible i.e.

(1) SDO F/S (AE) Supervisor F/S Gde-I while holding charge of a sub-Division, or SDO B/R in an out-station, where there is no SDO F/S in the case of Div stocks and of stores & T/P in the F/S yard.

(2) SDO B/R (AE) while holding charge of a sub-division, in case of stores held on Materials-at site accounts of projects, stores in hand ledgers and of T/P held on numerical account.

(3) SDO E/M (AE) SSAE E/M while holding Charge of a Sub-Division in case of stores, spare parts, tools and plant held in E/M installations.

e. "Garrison Engineer" includes Maintenance Engineer, Project Engineer and independent AGE.

f. "Checking officer" means any officer or SDO engaged in checking stores.

g. "Security staff" includes the Security guard or any employee whose duty includes checking of stores coming in or going out of stores depot/yard.

Responsibilities

3. The stock holder is solely responsible for the safe custody of the stores in his charge, for checking in full that the stores received by him are correct in quantity and are as described and for issuing the correct stores in the correct quantities according to the orders he received for maintaining a tally card BAFW-2280 for every item of stores in his custody and for making correct entries on them in respect of every issue and receipt. The stock holder will under no circumstances have the custody of or have access to stock registers. The duties of stock holder are laid down in MES Regs paras 112, 628 and 636.

4. The SDO is responsible for supervising the stock holders in the duties for maintaining the stock register and that all necessary entries are made there in respect of all transactions, and for checking stores para 103, 636, 637 and 101 of MES Regs refer.

5. The Garrison Engineer is responsible that SDOs and stock holders in his Division perform their duties correctly and checking stores by surprise visit at least once in a month. The duty may be delegated to AGE/AE but GEs must clearly understand that it is just as much part of his duty to inspect the stores held therein, and that it is equally as important that he should do so (at least once in a quarter) as it is to over see the work of his subordinates and to inspect and check works in progress para 74 & 97 MES Regs.

6. The CMES/SO-I (Works) should make a point of visiting the various store yards in his area and of checking a number of items of stores selected

at random. Paras 358 (v), 625, 626, 643, 680, 682, 692 & 695 as given in Table 'D' of MES Regs refer to his stores responsibilities in general.

Checks to be Exercised

7. The SDO will check 100 per cent of stores under his control during the course of the year. Approximately 25 per cent of items will be checked by him each quarter spread out over a number of occasions.

8. The Garrison Engineer will check not less than 20 percent of the stores held in each of stores yards in his Division during the course of the year. He may depute an AGE to exercise part of the check but will under no circumstances check less than 10 percent of stores personally. The GE will exercise his check continuously through out the year as in the case of the SDO and should normally do so without warning.

9. ACMES F/S will in addition carry out surprise checks in the various stations in the area at least once a quarter. On each occasion, he will check not less than 10 percent of the stores held in each of the store yards. During these visit he will also verify that in every case where the stores held on a store-in-hand ledger at the end of a month exceed the prescribed value vide para 679 MES Regs, the sanction of the CMES or GE has been applied for and that stores obtained from demolition and entered in the demolition register are disposed off or taken on the stock Registers or store in hand ledgers within one month.

10. The security staff Security guard will invariably check 100% of each incoming or outgoing consignments with the consigning documents. They will immediately report any discrepancies in writing to the stock holder or any other officer/SDO available in the store yard/store Divn.

11. The record of stocks held, which is subject to audit is the stock register and the purpose of checking is to ensure that balances on the ground agree with the balances shown in the stock register. Surplus and deficiencies are difference between ground balances and ledger balances. But during the physical check of the stores, the stock register will not be taken on the ground nor will it be referred to during the actual physical check.

12. As the check of each item is completed, the checking officer will if the ground balance agrees with it, initial and date against the balance on the tally card if there is a difference he will enter the words, "balances"

found by check and the ground balance found and add his dated initials. He will at the same time enter the ground balance and the tally card balance on stock taking report (BAFW-2221) which will be prepared and completed in duplicate.

13. After completing the ground check, the checking officer will examine the stock register and check the balances with the ground and tally card balances, as shown on the stock taking report. If there are discrepancies he will endeavour to reconcile them, by referring to vouchers, indents etc He will then enter the balances in the stock taking report with his dated initials in the stock register. When the check is finished, he will sign and date the stock taking report. the stock holder will also sign a certificate at the bottom of each sheet of stock taking report as follows :

“Certified that the quantities shown in Col-3 are correct and are held on my charge”.

General Inspection Points

14. Other points to be examined on inspection generally are:

a. **Furniture**

(1) That register of furniture authorised for each line (BAFW-2413) and sta register of auhtorised furniture BAFW-1811 is in accordance with reclassified accommodation and new buildings have been included.

(2) That Station Furniture Register BAFW-2279 takes into account furniture surveyed off and if arrangements for replacements have been made.

(3) That unit furniture distribution ledger BAFW-1814 and sta furniture distribution ledger show correct scales of furniture and if unauthorised furniture has been issued, hire charges for the same have been recovered. Entries should be up-to-date.

(4) That Furniture Repair Register and register of furniture deposited shows clearance time for repair work and material issued during one month should tally with repair work.

(5) That Register of U/S Furniture does not show accumulation of items of furniture and that auction is held regularly to clear off the same. U/S charpoy frames when surveyed off will not be

struck off the page, but separate pages for such receipts survey off, renewals made against it.

(6) That stores in hand ledger does not include unauthorised items such as drawing and survey instruments. That para 637 MES Regs followed, if applicable.

(7) That Baby indents are posted up-to-date.

(8) That all samples of charpoys, cane work etc are maintained.

(9) The Barrack damages are recovered regularly.

(10) That monthly valued summary is prepared vide para 679 MES Regs and maintenance estimates vide para 33 of E in C's Furniture pamphlet 1961.

(11) That Furniture repair estimates are prepared.

(12) That construction account is properly maintained. the expenditure on labour and material should be about the same.

(13) That B&H (Furniture) schedule and furniture type plans are up-to-date. These are to be reviewed annually.

(14) That no U/S furniture, or furniture liable to break in transit is transfered from one sta to another station.

(15) That each item of new supply of furniture is in accordance with specifications and high quality of workmanship.

(16) That Furniture yard is clean and tidy, that fire precautions are followed strictly and surprise fire parades are held frequently and that security measures are adequate.

b. **Divisional Stocks**

(1) That correct stores list Nos and descriptions are given both on the tally cards BAFW-2280 and stock Registers BAFW-2279 and authorised maximum/minimum limits recorded. How many items have been audited. That item shown as NIV are properly described and checked that they in fact are not in ASHLES or SDLES. That issue rates are entered in the stock Registers and quantities held are not excessive as shown by issues during the past twelve months.

(2) That civil/Military Credit Notes are complete showing R/I Vrs. No and date on counterfoils.

(3) That stock purchase Register BAFW-2316 maintained properly, if not maintained, stock Book rate will be incorrect. Is stock book rate register maintained ? Do issue rates include overhead charges which are agreed by UA and countersigned by GE?

(4) That the provision of stores does not exceed maximum/minimum limits ? Do they include special items of stores ? Is the establishment adequate for the amount of stores to be dealt with? Is provision of stock items made foreseeing the actual utility in future?

(5) That stores are properly stacked, binned etc and yards are clean and tidy, that proper precautions are being taken to preserve stores against deterioration, against pilfering and adequate fire precautions exist as laid down by the station fire committee.

(6) That demolition stores are taken into account, stores provided that Maintenance accordance is cross linked with baby indents and disposal is in accordance with normal procedure.

c. **E/M Sub-Division**

(1) That accommodation is adequate, particularly for spare parts, electrical goods and store yards are well maintained. Items which deteriorate quickly like PILC cable paint etc should not remain for long in stores. U/S stores should not be mixed with serviceable stores.

(2) That fans and meters register is up-to date and no repair work is accumulated.

(3) That demolition stores are disposed of expeditiously. This includes disposal of U/S machinery, plant, tools etc Items such a disposal of sludge oil, bulbs etc may be checked.

(4) That arrangements to meet deficiencies particularly in MT Vehicles are made. The repairs of vehicles be carried out and the off road vehicles be classified.

d. **B/R Sub-Division**

(1) That stores in Hand Ledgers are maintained properly and that monthly valued summary is prepared. Stores holding should not exceed that prescribed limit or Tk. 500/- or sanction vide para 679 MES Regs should be obtained.

(2) That Demolition Register, Road Metal Register, Bazar supply indent Book, Material-at-site. Account all are maintained and linked properly stacking disposal is done as required.

e. **E-3 Section**

(1) That quotation register is in order and list of suppliers maintained and kept up-to-date.

(2) That register of loss statements is properly maintained and cases finalized expeditiously.

(3) That all forms & publications pertaining to stores are available and arrangements for those N.A are made with the stationery Depot or E in C's Branch.

(4) That Register of stores Demand is up-to-date and all demands are made on due dates as required.

(5) Any problems?

Regularisation of Surplus & Deficiencies

15. Surpluses and Deficiencies will be regularised immediately after the completion of a check by:

a. Taking on charge stores found surplus on Transfer (Receipt) voucher BAFW-2253 in duplicate. The words "Found surplus on stock taking" will be entered at the top of Col. 2 with the description of the articles below. One copy is sent by the SDO to the UA.

b. Preparing a loss statement for stores found deficient on loss statement BAFA-498 in quadruplicate. At the same time Transfer (issue) Voucher BAFW-2253 in duplicate will be prepared by the Stock Holder or SDO in which the words "Loss under Sanction by the CFA vide loss statement Nodate..... will be entered at the top in red ink. One copy of the voucher is sent by the SDO to the UA.

16. "Stock verification certificate" as given below will be rendered on 31 July each year for the preceeding financial year to FC through LAO with a copy to DW&CE and E in C. It will be prepared on actual position and correctness thereof verified by the UA.

Stock Verification Certificate for 200.....

1. It is certified that:

100 percent stock verification for the year 20.... has been carried out on (date) .

OR

100 percent stock verification for the year 200..... could not be carried out for the reasons given in para 2 below. Only percent stock verification could be carried out on

OR

No stock verification for the year 200..... could be carried out for the reasons given in para 2 below.

2. Reasons for carrying out partial/not carrying out stock verification for the year 200.....

Signature
Rank/Designation
Fmn/Unit
Date

N.B. Alternate portions not applicable should be scored out.

17. a. When a stock holder is under orders of transfer, a check will be made of all stores on the charge of the outgoing stock holder in accordance with para 11 to 13 above. The incoming stock holder will exercise the functions laid down for the checking officer. He should in carrying out the physical check on the ground count. Weight or measure the items which he selects and satisfy himself fully.

b. Each sheet of the stock taking report will be signed by the outgoing as well as by the incoming stock holder. The balances on the stock register will be checked with the ground and tally card balances and further action will be taken by the SDO.

Absence of a Stock Holder

18. Whenever a stock holder dies, quits the service without notice, remains absent without leave or in extra ordinary circumstances such as arrest by the police, remains sick or is likely to remain sick for a period longer than seven days or is admitted in a hospital, the GE or AGE in respect of stations of which he is in charge will immediately appoint a subordinate to take over all the stores of which the stock holder is in charge and will order a 100 percent check of the stores to be made. This check will be made in the presence of the subordinate appointed to take over charge by the SDO or by another SDO as directed by the GE, but not less than 10 percent of the items held will be checked by an officer, it will not be counted as in any way contributing to the annual 100 percent check, but it will be conducted in exactly the same way as laid down in the proceeding paras. Stores may be issued by the subordinate appointed to take over charge while the check is proceeding but the whole stock of the articles which are issued will be first checked.

19. If a stock holder applies for leave of absence for a period, which in the opinion of the GE, is too short to warrant the formal handing over of his charge, he will be required to nominate a substitute who must be a MES subordinate at the same station and who must be approved by the GE. The appointment of such a substitute will not relieve the stock holder from his responsibility for the stores in his charge. In the case of the sickness of the stock holder, when there is no indication that it will be prolonged beyond seven days, arrangements are necessary for the issue and receipt of stores. In such cases either SDO will appoint one or carry out the duties himself. If the absence becomes prolonged provision of para 18 will be applied by the GE.

Warning

20. The order will be brought to the notice of all concerned dealing with the stores and their acknowledgement to this effect obtained in writing. The stock holders in general and security staff in particular will be warned that they will be held solely responsible for the losses that may occur in the stores/yard.

This supersedes Routine Instructions No 387 of 1990.

CHAPTER-V

ROUTINE INSTRUCTION NO 343/2008
STORE FOR DISPOSAL

Power of Declaration of Obsolete and Surplus Stores

1. E in C is empowered to declare the obsolete and surplus stores for disposal. Power declaration of obsolete and surplus stores up to Taka 10,00,000/-

Scope

2. The term 'Stores' in this instruction includes all stores, machinery tools, plant and equipment mechanical transport and its parts and also furniture and office, T&P. The disposal of furniture and office T&P. When rendered unserviceable, will be governed by paras 78 to 80 of the furniture pamphlet, 1961.

Surplus Stores

3. Surpluses are determined on the basis of stocks held, normal consumption and probable future requirements over and above the normal requirements or because they are of obsolete type.

4. Stores cost of which exceeds Tk. 10,00,000 which it is decided to declare surplus to works Dte E in C's Br for disposal will require approval Min of Def (Fin Divn) before they are declared as such vide para 1.

5. Surplus stores, the value of individual item of which does not exceed Tk. 10000.00 will be disposed of locally under normal procedure vide para 695 of MES Regs (will be reviewed).

6. Separate lists must be prepared in the draft declaration for serviceable and unserviceable stores and also for machinery etc having no sale value except as scrap. The procedure followed for disposal of serviceable surplus stores will generally apply for disposal of unserviceable stores except that preliminary write off/survey action for unserviceable stores must be completed.

This supersedes Routine Instructions No 391 of 1990.

ROUTINE INSTRUCTION NO 344/2008
DISPOSAL OF SURPLUS SERVICEABLE STORES

1. The report of surplus serviceable stores will be submitted by DsW/CEs on E3 form 'D' to the E in C's Branch in triplicate, para 5 of RI 343 also refers.
2. Proforma E 3 Form 'D' is given below:

REPORT OF SURPLUS SERVICEABLE STORES FOR DISPOSAL

(E 3 Form 'D')

Designation of stock holder Location of Stores

Item	Description of stores	Unit	Qty	Wt
(a)	(b)	(c)	(d)	(e)

Rate per Unit	Book value	Present assessed value	Condition	Rmks
(f)	(g)	(h)	(j)	(k)

Segregation

3. The control over stores formally declared as surplus on E 3 Form 'D' automatically passes out of the MES formations in which they are held, and these formations remain responsible for their safe custody only and for producing them, when required. As such stores remain for some time in their custody, it is necessary to maintain a separate account. These stores will, therefore by struck off the ledgers on a regular issue voucher BAFW-2253 from General stock segregated on ground within the same zone to certify the actual quantities declared & taken on charge on Disposal ledger. Tally cards, enfaced with the word 'Disposal' in red ink will be maintained in respect of all stores held for disposal.
4. The E in C's Branch will consider the eventual consumption of stores in other wings of MES service.

RESTRICTED

5. Stores which are not disposed off in two consecutive auctions will revert to stock holders for disposal under their own arrangements.
6.
 - a. No reserve price will be fixed. The stock holders will indicate the book value (where known) or estimated disposal price (EDP) of important stores such as vehicles A B & C Types plants aircraft, ships, lanches, bridging equipment, machinery etc In case of other items no EDP will be given by the stockholders.
 - b. In case of heavy lift stores which can not be removed without the help of a crane, stock holder will provide carriage facilities.
7.
 - a. Surplus New packing material and containers are disposed of on "As is when is" basis.
 - b. Whenever any packing material is provided or any change is made in the existing one, for transportation purposes by the MES for surplus stores, the purchaser will be charged cost of material and labour plus departmental charges at 24.50% vide para 248 MES Regs. The approval of Govt. department or that of the private individual body for the cost of packing materials and deptt. charges will be obtained beforehand.
 - c. In the case of purchaser being a Govt Deptt. the cost of packing material plus departmental charges will be included in disposal issue voucher and adjusted by book debit. If the purchaser is a private individual/body, he/they will be asked to deposit in advance a lump sum (based on the estimated cost of incidental works plus departmental charges) before the work is executed.
8. No person will be permitted to examine stocks of stores declared surplus without a letter of authority from E in C's Branch.
9. Sale accounts will be prepared on BAFA-58.

This supersedes Routine Instructions No 393 of 1990.

ROUTINE INSTRUCTION NO 345/2008
DISPOSAL OF UNSERVICEABLE STORES

General Principles

1. MES formations are permitted to dispose of U/S stores, Such stores will not be reported to the E in C on E3 form 'D' but will be disposed of by public auctions, conducted by the auctioneers appointed by DW&CE. Stores will be disposed off, after proper write off action under table 'B' item (vii) MES Regs. When loss statements for writing off U/S stores are sent to E in C's Branch, DsW&CEs and CsMES will ensure that recommendations regarding disposal of U/S stores are endorsed on the loss statements.

2. The U/S machinery and equipment, tools and plant, mechanical transport and its parts will be disposed off as under:
 - a. If the machinery etc is scrap and scrap can be utilized in the area, DW&CEs will order its transfer within their respective areas.
 - b. Surplus iron/metal scrap will be disposed of by the stock holders upto Tk. 5,000/- (to be reviewed) by auction.

3. The Govt controlled selling prices of scrap are shown below:
 - a. Re-rollable scrap Per. M.Ton
Thickness 9.53 mm and above weight 159 kg Tk. 30000/-
 - b. Re-Meltable scrap Tk. 28000/-
 - (1) Heavy : Thickness above 3.17 MM
 - (2) Light : Thickness 3.17 MM and below:
 - (a) Fresh uncorroded and unruined punchings and cuttings of steel plates and other steel sections Tk. 30000/-
 - (b) Corroded and rusted cuttings and punchings of steel sheets, plates/other steel secs... Tk. 26000/-
 - (c) General and domestic returns like buckets and trunks, enamelware etc 2000/-

RESTRICTED

(d) Steel turnings and Borings.....	2000/-
(e) Cast Iron scrap.....	15000/-
(f) Cast Iron Turning and Borings	5000/-
(g) Tin plate cuttings and clippings	2000/-
(h) Re-workable scrap, usable in its original shape and form ...	28000/-

4. If old machinery etc has book value of Tk. 10,000 or below it will be disposed off by public auction.

5. Machinery of any value which has been declared completely unserviceable or beyond economical repair i.e. class VI by the competent authority will be disposed off through public auction by the stock holder.

Note :- This does not restrict or enhance the powers of write off or enhance the powers of disposal of officers whose financial powers are less than Tk. 10,000/-

6. All Machinery etc held on charge of MES will be down classified in accordance with SBAO 21/58 including static plants by EME Dte who are also responsible for repair of same. All MES equipments rendered class IV/V will be back loaded to CMTD Dhaka for further repairs on the authority of BLR certificate. If it is declared BER it may be economical to dispose off the same under normal procedure there who will afford credit to MES of money so realized.

7. A register will be kept in stock/Furniture T&P of U/S machinery etc for disposal (BAFW-2279). A separate page will be used for each individual item of machinery etc

8. A brief designation of the machinery etc as used in stores lists will be entered against "Description of article". Other entries will not be made there. The columns in the body of the page will be disregarded and undermentioned entries will be made in the register, when machinery is taken on charge.

- a Report of the Inspecting officer E/M or EME officer alongwith copy of Machinery History sheet
- b. No & date of the Transfer Expense Voucher.
- c. No & date of the Transfer Receipt Voucher under which the machinery taken on charge as U/S machinery for disposal. If U/S not

due to fair wear and tear loss statement will invariably accompany a C of I proceedings.

d. No & date of Receipt Vouchers by which useful parts and scrap metal have been taken on charge elsewhere.

9. When the machinery has been disposed off the method of disposal and the No and date of sale account, if sold, and the transfer issue voucher on the authority of which the machinery is struck off the register will be entered in red ink below all the previous entered in the Register of U/S Machinery.

Evaluation

10. The E/M officer of the MES Fmn concerned will record the following particulars in the Register of U/S Machinery and certify that the particulars are correct by his signature and date, before disposal of Machinery etc

- a. (1) Full description.
- (2) Present Location.
- (3) Age.
- (4) Present condition with BLR or BER certificate of EME officer as authority.
- (5) Original cost.
- (6) Depreciated value.
- (7) Estimated sale price, considered reasonable by an E/M officer or amount of credit, if any allowed on account of sale proceeds in an estimate.
- (8) Date of which credit is required.
- (9) Whether dismantled or still to be dismantled in which case approx cost of dismantlement should be stated.
- (10) Approx cost of packing.
- (11) Approx weight, in case of heavy plant, give the number of wagons or trucks also required for loading.
- (12) Approx cost of placing on rail.

2. On the basis of above report no survey board is necessary for disposal of U/S machinery unless specifically ordered by DW&CEs or E in C.

This supersedes Routine Instructions No 395 of 1990.

ROUTINE INSTRUCTION NO 346/2008
RE-EXAMINATION OF PAYMENT ISSUE OF
ENGINEER STORES

(PARAS 680 & 682 MES REGS REFER)

1. Para 680 of MES Regs is used for sale of new stores demolished or part worn for following purposes to :
 - a. Respective units of three services for training or self-help or constructional works paid for out of Regimental funds.
 - b. Other Govt depts for bonafide Govt works.
 - c. Semi Govt depts or private bodies for emergency works only, such as flood control, road breaches, storm damages or works of national importance.
 - d. Individuals in Govt employ for personal and bonafide use only.
2. The Conditions for sale of stores are:
 - a. That stores are held in excess of normal requirements and can be spared without interference to MES works in progress.
 - b. That the stores are removed by the purchaser from the places where they lie, but despatch to destination may only be agreed in exceptional cases and the purchaser will be required to accept charge on account of handling freight and any other incidental charges.

Sale of Stores

3. The new stores are sold at stock book rate plus an addition of 10%.
4. Stores ex-demolition are sold under following restrictions:
 - a. Sale of stores ex-demolition will be restricted to only those items the price of which has been assessed at 50% of stock book rate or above, the levy of 10% addition will also be made on the assessed price of those stores.
 - b. The stores price of which has been assessed at less than 50% of stock book rate will not be reported as available for sale under para 680 MES Regulations and will be disposed of by auction as laid down in para 695 MES Regulations.

5. Same principle as stated in para 4 above will apply to other unserviceable stores except machinery etc see para 7 below.
6. When loss statements for writing off U/S stores and machinery are sent, disposal action should be endorsed on the loss statements (BAFA-498).

Machinery etc

7. a. This includes machinery and equipment, tools and plant, mechanical transport and its parts. New machinery will not be sold by MES.
- b. Surplus part worn machinery etc if classified down to and including class V (or repairable) will be sold by MES at 50% to 100% of the stock Book rate depending upon its condition, plus 10% depty charges under orders of respective DW&CEs.
- c. Such machinery etc if class VI or below (or beyond economical repair, obsolete) will be sold by MES at 10 to 50% of the stock book Rate depending upon its condition plus 10% charges under orders of E in C.
- d. Any machinery etc which will not fetch the desired price and also machinery etc the value of which is assessed below 10% will be sold by public auction directly upto Tk. 10000 and through ESD, MES exceeding this cost under normal procedure.

Departmental Charges

8. Amount representing 10% departmental charges sold under para 680 MES Regs is not refundable, when unused stores are returned by the purchasers.
9. The sale of stores will normally be controlled at DW&CEs level, but para 7 (c) also refers.

This supersedes Routine Instructions No 397 of 1990.

CHAPTER-VI

ROUTINE INSTRUCTION NO 347/2008 **GENERAL RULES – FURNITURE**

Definition of Furniture

1. The term furniture includes not only domestic, hospital and office furniture, but also gymnastic apparatus, fire-fighting equipment, conservancy equipment and certain other articles of equipment for barracks, hospitals and workshops.

MES Responsibility

2. The MES are responsible for the provision and maintenance of all furniture required by the Army, Navy and Air force with certain exceptions. These exceptions are:

- a. Office furniture required by the Military accounts department other than that required for the use of unit Accounts attached to units and formations for which furniture is provided by the MES.
- b. Furniture for temporary camps with certain exceptions.
- c. Maintenance and renewals of the string and tightening ropes/Jute newer of charpoys held on charge by units.

3. The MES are also responsible for maintenance of furniture supplied as gifts by the Red Cross/ Red Crescent society to Military Hospitals, but not for its replacement when beyond repair or if lost. It remains in charge of the medical authorities and does not become MES furniture.

Scales of Furniture

4. Furniture is provided and issued according to authorised scales which are published as “Barrack and Hospital (Furniture) Schedules”. The scales cover all requirements except the following, which are provided as “as required” basis:

- a. Any items of furniture not available in B&H (Furniture) schedule should be vetted by Area Commander/Base Commander.
- b. Scale of furniture for units, not mentioned in B&H (Furniture) Schedule should be finalised by Area Commander/Base Commander and should be vetted by E in C. But under no circumstances, the scale

should exceed similar type of building available in B&H (Furniture) schedule.

c. Furniture and other equipments for MES offices, installations and inspection Bungalows should be finalised by respective DW&CE's.

5. Special scales may be authorised by the Government of Bangladesh. This is usually done when the scale is required to meet a need which is not expected to be a permanent one, or when the scale, is provisional. If an amendment to an existing scale in B&H (Furniture) Schedules, or an additional scale, is subsequently published which covers the special case, the scale authorised in the Government of Bangladesh letter is automatically superseded.

6. If a project is initiated which includes accommodation for which furniture is required and for which no authorised scale exists, the necessary furniture may be included in the estimate and sanction to the estimate by CFA constitutes sanction to the scale of furniture provided there in. In the case of a project sanctioned at a level lower than CFA the proposed scale of furniture must be forwarded through staff channels to CFA for sanction.

Barrack and Hospital (Furniture) Schedules

7. B&H (Furniture) schedules are divided into a number of sections, each of which contains a number of separate schedules. The arrangement of present B&H (Furniture) schedule are given in Annex - A to this R.I. They include scales for all ordinary living and ancillary accommodation, schools, Hospitals Installations etc, but do not cover special cases. They also provide for reserve of certain articles of furniture to be maintained within each MES Division.

8. Accounting of padlocks for Security of building is the responsibility of SDO B&R.

Design of Furniture

9. Except for the special technical and office furniture referred to in para 4 (a) and articles of special design, which may be required in MES offices, all furniture provided by the MES will be manufactured to standard plans issued by the Engineer-in-Chief. These plans are based on general

specification by the Government of Bangladesh. The CAS/CNS/COAS may vary the actual design provided general principles are not altered and the cost is not materially increased. In such cases, intimation to the E in C's Branch (Wks Dte) will invariably be given. A complete set of authorised furniture plans will be kept by every GE/AGE and by the SDO F&S or Supervisor F&S in charge of the furniture at every station.

10. A complete list of article provided by the MES, with the number of the relevant standard plans, is published as Barrack and Hospital furniture of MES supply". This publication includes general specifications for the manufacture of furniture and a price for each article, referred to as the MES Schedule of Rates.

Pricing of Furniture

11. MES Schedule of Rate will be used for :

- a. The preparation of estimates.
- b. Inviting tenders for manufacture.
- c. The valuation of stocks.
- d. The pricing of vouchers, loss statements and barrack damages bills

Note:

1. For articles of special design and obsolescent or obsolete articles, for which there is no MES Schedule of Rates, the actual purchase price, if known, or an assessed purchase price will be used for the above purpose.

Allocation of Expenditure

12. B&H (Furniture) schedule include scales for all three defence services.

13. The heads of account to which the provision and maintenance of furniture is charged are given in Annex - B.

This supersedes Routine Instructions No 3000 of 1990.

ARRANGEMENT OF BARRACK AND HOSPITAL
(FURNITURE) SCHEDULES

Ser	Section	Description of schedules	Remarks
(a)	(b)	(c)	(d)
1.	Section - A	Residential Accommodations/Messes	
2.	Section - B	Offices	
3.	Section - C	Fire fighting Equipment and General Conservancy	
4.	Section - D	Medical	
5.	Section - E	Centre Schools and Training Establishments	
6.	Section - F	Emberkation	
7.	Section - G	Service Corps	
8.	Section - H	Ordnance corps and Ordnance factories	
9.	Section - J	Remount Veterinary and Farms corps.	
10.	Section - K	Wksp	
11.	Section - L	Miscellaneous	

Note:

1. All above sections are to be equally applicable for Army/Navy/Air force.

HEADS OF ACCOUNT TO WHICH PROVISION AND
MAINTENANCE OF FURNITURE ARE DEBITED

Ser	New supplies	Heads of Account		
		ARMY	B. N	B. A. F
(a)	(b)	(c)	(d)	(e)
1.	a. On account of increases in scales b. On account of increases in accommodation	3/1931/0120/6821	3/1933/0100/6821	3/1934/0100/6821
2.	Renewal and Repair	3/1931/0120/4906	3/1933/0100/4906	3/1934/0100/4906

Note :

1. The head of account to which the new construction, alteration and re-appropriation is debited.

Authy: Defence services classification Hand Book 1999

ROUTINE INSTRUCTION NO 348/2008
PROVISION OF FURNITURE

Classification of New Furniture

1. New furniture is provided under two heading:
 - a. New supplies.
 - b. Renewals.

2. New supplies cover the provision of furniture additional to that already held on charge. Additional furniture is provided in two circumstances:
 - a. When increase in scales are sanctioned either by additions to the articles authorised in B&H (Furniture) Schedules or by additions to the units services etc, or to the categories of persons to whom the issue of furniture is authorised. This will not be treated as authority for immediate issues, but is subject to availability of funds.

 - b. When the accommodation in a station is increased, either by new construction, alterations or re-appropriations. The introduction of a revised standard plan is not an authority for the provision of Furniture of the revised pattern as new supplies.

3. Renewals cover the replacement by new articles of furniture held on charge, which has become unserviceable either by fair wear and tear or which has been damaged beyond repair or lost. Furniture will not, however, be replaced when the quantities of serviceable furniture remaining are sufficient for the requirement of the station. Articles of a pattern declared obsolescent will be replaced by articles of the latest standard plan when they require replacement.

4. Since all building projects include, or should include the provision of furniture wherever authorised, all existing building for which furniture is authorised, should be furnished up to scale, as and when funds are available for this purpose.

PROVISIONS OF FUNDS

New Supplies

5. New supplies necessitated by increases in scales. The publication of and addition to authorised scales is not if so fact an authority for the immediate provision of the furniture. Funds for new supplies on this account are allotted annually. Garrison Engineer will demand funds under the appropriate heads of account (see Appendix B) in their annual Budget Estimate Forecast to cover the provision of all articles required to complete scales as shown in the Annual Furniture Return (BAFW-2219) See para 30 of RI No 351

New Supplies Necessitated by Increases in Accommodation

6. Project for providing increased accommodation in a station will always include provision for the furniture required for the increased accommodation. Account will always be taken of articles held on charge, including those of obsolescent patterns and of similar or suitable patterns, which are surplus to the requirements of existing accommodation, only those articles which cannot be so provided will be included in the project. The CMES or Garrison Engineer will include the cost of the furniture required in the plinth area estimate (BAFW-1792). The cost will be worked out on BAFW-1792F which will be attached to BAFW-1792. The unit of calculation may be per head, per quarter, per building etc, as is most convenient, the price per unit will be calculated on MES Schedule of Rates. Allowance will be made for furniture available from surpluses in the same station or available for transfer from other stations, and for contractors percentage. A specimen of BAFW-1792F showing method of calculation is given at Annex - A to this instruction.

7. Provision for furniture will like wise be included in estimates for minor works costing between Tk. 75,000/- and Tk. 90,000/- which involve increase in accommodation. A lump sum will be included in the simplified Appendix 'B' and sufficient details will also be attached to Appendix 'B' to show how the provision for furniture has been calculated. Special provision for furniture will not be made when accommodation is increased by a minor work estimated to cost less than Tk. 75000/-. The deficiency, if any of furniture so arising will appear in the annual furniture return and the funds required will be included in those demand in the Annual Budget Estimate Forecast. (See para 5)

Renewals

8. Funds for renewals of furniture will be demanded annually by Garrison Engineers in the Annual Budget Estimate Forecast under the appropriate heads of accounts (See Annex B of RI 347) at 2¹/₂% percent of the book value of all furniture held on charge of standard or obsolescent patterns as shown in the Annual Furniture Return (BAFW-2219). Funds will not be demanded for the renewal of furniture which has been presented by the Red Crescent Society to military hospitals. Funds will be allotted to Garrison Engineers specifically for renewals. New furniture may be manufactured or purchased only to the extent to which funds are allotted and to replace articles which have been written off as unserviceable or found deficient. Should the funds allotted for renewals in any financial year be insufficient to cover the cost of all the furniture, which requires to be renewed, the renewals which cannot be carried out from the funds allotted will be dealt with as abnormal and action will be taken as provided in works procedure.

Estimates for New Furniture

9. Before orders are given for the manufacture or purchase of any furniture, the Garrison Engineer will prepare an estimate on BAFW-2222 of the cost of all the furniture required and will forward it to the CMES for his scrutiny, whether the amount of the estimate is within the Garrison Engineers powers of sanction or not. Before returning the estimate to the Garrison Engineer, the CMES will amend it in respect of articles of which there are surpluses. Whether of the same patterns or of similar or suitable patterns, in other divisions and he will order the transfer of these articles to the station where they are required.

Provision of Furniture by Transfer

10. Transfer of furniture may be ordered by CsMES within their respective areas, and will be resorted to, wherever possible in order to save expenditure on the manufacture or purchase of new furniture provided that the cost of carriage is less than the cost of providing new furniture. On receipt of the Annual Furniture Returns, CsMES will order the transfer necessary to make up deficiencies in one division from surpluses in other divisions. The transfer of obsolescent patterns may be made up by transferring articles, which although of different pattern, are suitable for

use in place of those, which are deficient. A CMES will not transfer furniture, which is not surplus to the authorised scale of a station in order to make up deficiencies in another station without first consulting the formation Commander. Interwing transfer of surpluses may also be ordered by the Engineer-in-Chief in consultation with the service HQs. Interwing transfer will also have financial adjustment of the cost etc

11. All charges in connection with the transfer of furniture incurred by consignor and consignee will be debited to his own allotments for repairs. Debits will not be raised by the consignor in respect of the charges incurred by him or the value of furniture if transferred within the same service.

12. Instruction regarding the repair of furniture before its despatch and precautions to be observed in consigning furniture by rail are given in Annex - B.

13. Furniture so transferred will be accounted for as follows. The SDO consigning the furniture will prepare a transfer issue voucher, BAFW-2253 in quadruplicate and will forward three copies to the consignee. At the same time he will strike the article off ledger charge in the Station Furniture Register (BAFW-2279) and will amend the Station Furniture Distribution Ledger (BAFW-1814) See para 12 & 19 of RI No 351). The SDO receiving the furniture will return two copies of the transfer issue voucher to the consignor duly accepted, retaining the third copy. At the same time he will take the furniture on charge in the station Furniture Register and will amend the Station Furniture Distribution Ledger and, if the furniture is issued immediately to a unit, the unit distribution ledger (BAFW-1814)(See para 15 of RI No 351). Of the two copies of the accepted vouchers, which are received back from the consignee, one copy will be forwarded by the SDO to the Unit Accountant.

Manufacture and Supply of Furniture by Contract under PPR-2008

14. a. **Pre Tender Activities**

- (1) After obtaining admin approval from CFA, select "OBJECT" to be procured. Once Annual Procurement plan is approved split of package to avoid approval procedures and tendering method is not permitted. Approval of annual procurement plant shall be considered as administrative approval.
- (2) Design, if required.

(3) Write specifications, not to mention origin brand name mention only recognized national and/or international standards. When unable to write specification origin and/or brand is to be mentioned but after a slash, a word “EQUIVALENT” must be added.

(4) Prepare and approved Engineer’s/Official estimate on the basis of prevailing market rates and prices. Approved Engineer’s/Official estimate shall be kept under sealed cover (only to be opened by the tender evaluation committee during the evaluation process). Schedule of works to be shown as per Annex ‘C’.

(5) Identify source of fund (and development partner, if any).

(6) Clearly identify employer tender approving authority TEC chairperson, name and designation of person to represent employer. Identify engineer, engineers, representative, location (s) for selling and receiving tenders, location of pre-bid meeting and tender opening and address for lodging complain by tenderer. Form TOC, TEC and if required technical sub- committee. TEC is composed of at least 5 members of who 2 are from the out side of the procuring entity. But in case of tender of upto Tk. 25 lac for works and 10 lac for goods no need to bring 2 out side members, they may be from other procuring entities established under the same Ministry/Agency. TEC shall be chaired by the official below the rank of approving authority. TOC is composed of at least 3 members of whom 1 member must be TEC members. No need to bring out side members (s).

(7) Selecting procurement method and appropriate STD.

(8) Selecting minimum qualifications and eligibility criteria.

(9) Pricing tender documents not exceeding its re-production cost.

b. **Tendering Activites**

(1) Advertise directly by procuring entity using standraed format issued by CPTU in national and where applicable also regional daily newspaper or by sending invitation where applicable. When engineer’s estimate is Tk. 1 crore and above also advertise in

CPTU's website. Time between publication of advertisement and deadline for tender submission must not be less than 21 days for open tendering method. For RTM time between invitation and deadline for tender submission must not be less than 21 days for procurement of works 14 days for procurement of goods. In emergency and catastrophic situation time between publication of advertisement invitation and deadline for tender submission must not be less than 14 days for both OTM and RTM. Time between invitation and deadline for tender submission must not be less than 14 days for re-tendering.

(2) Selling tender documents upto day prior tender closing date, no need to present any evidence by tenderer for purchasing tender documents. No enlistment is required to avail tendering opportunities except for restricted tendering method.

(3) Amend tender documents if required.

(4) Extend tender closing date if required.

(5) Receive tenders, receive tender modifications (s), withdrawal (s) and submission (s) if any before closing tender.

(6) In presence of tenderers authorized representatives (who attend the tender opening) opening tenders by at least 3 members tender opening committee (TOC) of whom 1 member must be from tender evaluation committee (TEC) within 24 hours of closing of tender.

(7) After the opening of tenders, information relating to the examinations, clarifications, and evaluation of tenders and recommendations for award must not be disclosed to tenderers or other persons not officially concerned with this process until the award of the contract is announced.

(8) Tenderers may be contracted for clarification and correction of arithmetical error (s), if required during tender evaluation.

c. Evaluation of Tender by Tender Evaluation Committee (TEC)

(1) Preparation of working paper by procuring entity for tender evaluation.

(2) Evaluate, Tender by TEC in accordance with the evaluation

criteria specified in the tender documents (including tender information declared and written in tender opening sheets and approved and sealed official estimate which shall be opened by TEC only). For open tendering method single tender is valid. For restricted tendering method inviting only enlisted tenderer. For evaluation 3 tenders are required. In case of tie, selection of successful tenderer not by Lottery selection on the basis of superior past performance. In case of lowest evaluated tender is significantly below engineer's estimate TEC may request a tenderer to submit a rate analysis and only exclude this tender from the competition, when it becomes very clear that this tenderer is inexperienced and cannot price its tender properly. In case of tenderer quotes a low price just because it happens to enjoy some favourable conditions with respect to this tender or because it has a particular interest in maintaining as responsive and evaluated accordingly.

(3) Collectively certificate of TEC members in evaluation sheet that TEC has performed their duties in compliance with the relevant regulations of the PPR 2008 imposed on them by procuring entity.

(4) Submitting TEC recommendation including evaluation report and tender comparison report (not the tender documents submitted by the tenderer) directly to approving authority (without any intermediate stops) with the recommendation in favour of evaluated lowest tenderer for awarding contract including relative positions of remaining substantially responsive and eligible tenders indicating possibility of awarding contract if lowest evaluated tenderer fails to respond.

15. **Award and Signing Contract.**

a. After obtaining approval issue notification of award to successful tenderer for furnishing performance guarantee and signing contract in an expeditious manner that contract can be signed with the successful tenderer before expiring tender validity period. At the same time send contract agreement on non judicial stamp, particular conditions of contract and all other documents forming the contract to the successful tender (i.e. contract agreement to be prepared and completed at the cost borne by the employer).

- b. Receive performance guarantee from successful tenderer issued by schedule bank in favour of successful tenderer in the prescribed form provided in the tender documents without making any modification and alternation. Receive also signed contract agreement all other documents forming the contract from the successful tenderer.
- c. Verify authenticity of Performance Guarantee furnished by successful tenderer.
- d. Within tender validity period signing contract with successful Tenderer in prescribed form provided in the tender documents without making any modification and alteration.
- e. Inform unsuccessful Tenderer that their tenders are unsuccessful.
- f. Report contract award to CPTU in prescribed form when Engineer's estimate in Tk. 1 crore and above.

16. The practice of treating contracts for the supply of furniture as if they were contracts for the supply of stores must not be permitted. The work of manufacture must be supervised at all stages in the same manner as in a work contract. Not only will delays be inevitable if furniture is not seen and defects pointed out, until the finished article is produced for inspection, but many defects can only be detected and eradicated if the furniture is inspected during the course of manufacture. Under no circumstances must painting, polishing or varnishing be permitted to be done until the furniture has been passed except for finishing. As a rule, furniture should be manufactured except for finishing in the contractor's own premises and it should then be produced for inspection in the MES furniture yard, where the painting polishing or varnishing should be done. If the contractor should be permitted to do the finishing on his own premises, it must be done under close and continuous supervision.

17. Work orders will be given to the Contractor on BAFW-1823 which will be prepared according to the normal rules. Each work order will cover as many articles as are required at any one time. In the case of a project the orders should be so timed, that accepted furniture can be placed at once in the buildings for which they are intended, in order that new furniture shall not stand in the open and exposed to the weather.

18. All accepted articles will be entered in the Measurement Book (BAFW-2261). Bills will be prepared as for ordinary works contracts on

BAFW-2262, which will be supported by the Measurement Book and a copy of the Work Order and of the Transfer Receipt Voucher (see para 22). The normal rules apply to the preparation, scrutiny audit and payment of bills and to the entering of liabilities and expenditure in the Construction Account.

Manufacture by other Agencies

19. **By MES.** In exceptional circumstances furniture may be manufactured by directly employed labour, when the rules governing and work executed by this method will be observed. The cost of furniture manufactured by MES must compare favourably with the cost of manufacture by contract.

20. **By Engr Units.** If Engr unit wish to undertake the manufacture of furniture in order to give training to articles, they should be given the opportunity of doing so, and should be given small quantities of several different types of furniture to make rather than large quantities of one type. The furniture must be made according to standard plans and specifications and will not be accepted, if it is not passed as being upto specification. No payment will be made to the unit, but the quantity of timber and other materials will be reimbursed to the unit, equivalent to the amount of furniture accepted, calculated on the quantities shown on the standard plans.

Purchase by Units

21. When public funds are not available to provide articles of furniture required to complete authorised scales, units may be permitted to provide the deficient articles by purchase through the MES in which case departmental charges are not levied, or from other sources. Such articles must be manufactured to the standard B&H furniture plans. When public funds become available, the articles may be taken over by the MES under the orders of the Formation Commander at a valuation to be fixed by the CMES, provided that they are in good condition.

Accounting and Marking

22. From whatever source furniture is received, the SDO will take it on charge in the Station Furniture Register (BAFW-2279) by means of a Transfer Receipt Voucher (BAFW-2253) on which the page number of the Station Furniture Register on which it has been taken on charge will be

entered against each item. He will also amend the station Furniture Distribution Ledger (BAFW-1814).

23. All furniture will be marked by branding in the manner shown below. The figures represent the Contract No and year in which manufactured or purchased.

DW & CE (Air) -	25 of 07/08
CMES (Navy) -	25 of 07/08
GE (Army) Bog-	25 of 07/08
T&P GE (Army) JSR-	25 of 07/08

Hiring of Furniture by Government

24. Hiring of furniture to make good deficiencies is not permissible except in the special case when furniture can not be provided for married officers of the Bangladesh service paid under the Bangladesh Army pay code. who have selected to occupy furnished accommodation (See para 2 of RI No 347). Before hiring is resorted to any furniture hired out to individuals not entitled to furniture and which may be required, will be withdrawn and the CMES and GE will endeavour to provide required articles from other station. The actual hiring of furniture required for this purpose is the responsibility of the O.C station, the MES have no responsibility for its safe custody even if it remains on hire, when the quarter for which it has been hired is unoccupied. The MES are, however, responsible for accounting for the expenditure incurred on hiring (see para 26)

25. Hiring of furniture for a special purpose and for a limited period e.g. for examinations for entrance into the Defence services, may be sanctioned by the service HQ to whom the formation concerned will apply through staff channels. The MES will provide as many of the required articles as possible from surpluses and reserves or from vacant buildings, but will not withdraw articles hired out to non-entitled individuals, nor will furniture be transferred from other stations unless the cost of transport will be less than the cost of hiring. The GE will arrange the hiring in this case, quotations will be called for before hiring the furniture.

26. Payment of bills for hire of furniture-In cases failing under para 24 payment is initiated by the OC station who will prepare a contingent bill (BAFW-115) in triplicate and will forward it together with the pre-receipted bill of the furniture contractor to the GE for payment the contingent bill will be countersigned by the OC station. In cases falling under para 25 a contingent bill is not necessary. The contractor will forward a pre-receipted bill on his own letter head in triplicate to the GE.

27. In both cases the GE will allocate bill to the relevant head of accounts and the normal MES procedure will be followed for the payment of the bill and the booking of liabilities and expenditure in the Construction account of the SDO, F&S.

28. **Life Time of Steel Furniture.**

a. The lifetime of steel furniture will be 20 (twenty) years except charpoy TS which will be 10 (ten) years.

b. The lifetime may be relaxed upto some extent if it is damaged by salinity for coastal area i.e. GE (Navy) Ctg & Khulna. GE (Air) Ctg, AGE (Amry) Bhatiary, Haliashahar & Jahanabad. Cox's Bazar under GE (Army) Ctg. A Sta B of O to be conveyend to asses the damage and relaxation of time may be approved through a B of O if require and needs to be sent to Wks Dte for approval.

29. **Authorization of Curtain & its Life Time.** Curtain is authorized for the Qtrs of GOC/Area Commander, Bde Commander, Sta Commander and (A & B type Qtr) & equivalent rank of Offrs and Offrs Mess. The life time of above mentioned Curtains will be 04 (Four) years.

30. **Authorization of Carpet & its Life Time.** Carpet may be authorized for all 'A' type Qtrs & VIP Room for at least 5 years life time.

Authy:

AHQ E-in -C's Branch Wks Dte Ltr No 802/Rev/81/E-8 dt 12 Oct 2005.

31. Life time of Jute Newer will be 05 (Five) years.

32. Life time of Furniture made of MLB/MDF board will be 10 (Ten) years.

RESTRICTED

- 33. Life time of chair plastic without arms 05 years.
- 34. Life time of chair easy plastic 05 years.
- 35. Life time of Receptacle small plastic 03 years.
- 36. Life time of Receptacle large plastic 03 years.

This supersedes Routine Instructions No 3001 of 1990.

(REFERRED TO IN PARA 6 OF RI 347)

For Estimate of Furniture

Ser	Description of No work	Quantity	Unit	Rate in Tk.	Cost in Tk.
(a)	(b)	(c)	(d)	(e)	(f)
1.	Married officers quarters (Lt Col and above)	4 qtrs	Per Qtr	3000/-	12000/-
2.	(Major and below)	2 qtrs	Per Qtr	2200/-	4400/-
3.	Single Officers quarter		Per Qtr		
4.	(Senior officers)	2 qtrs	Per Qtr	1000/-	2200/-
5.	(Junior officers)	8 qtrs	Per Qtr	850/-	6800/-
Total					25400/-
6.	Deduct 40% available from surpluses				10160/-
Balance					15240/-
7.	JCOs including club	20 JCOs	Per JCOs	500/-	10000/-
8.	ORs including ancillaries	40 ORs	per ORs	350/-	14000/-
Total					24000/-
9.	Deduction 5% available from surpluses				1200/-
Balance					22800/-
Total					38040/-
10.	Add 5% anticipated contractors % on Tk 38040				1902/-
G/Total					39942/-
Say					39950/-

INSTRUCTION REGARDING THE MOVEMENT OF
FURNITURE BETWEEN STATIONS

1. When surplus furniture is transferred from one station to another, it must be in good and serviceable condition. Painting and polishing, however, will not be done at the despatching station, as the articles will generally require repainting or repolishing at the receiving station.
2. When despatching furniture by rail, full wagons will be demanded unless the quantity to be moved is too small to justify a full wagon. Wagons will be sealed and convey notes will be used as for other stores furniture will be despatched on civil credit notes.
3. Adequate precautions must be taken against damage of the furniture in transit by rail. Damage can only be avoided by loading and securing the furniture in such a way as to avoid movement when subject to the stocks that are inherent in the marshalling and shunting and even in the running over open lines, of goods wagons. The furniture should be arranged as to take up, if possible, all the floor space of the wagon. If this is not possible, a central space should be left and timber struts and packing should be used to prevent inward movement. To prevent damage of one piece of furniture by another, such precautions should be taken as securing doors of almirahs, wedging drawers, 'nesting' articles such as tables and tying them together, so that the legs of one are protected by the tip of another. Crating is not usually necessary except when sending a few individual pieces which would not justify a demand for a full wagon, but light open crating may sometimes be desirable over table and chair legs and other parts particularly liable to damage. In packing the wagon, furniture should first be placed round the sides secured, and then the centre should be filled. Pieces may be placed above other pieces only, if the top level of all the furniture is generally at the same height and if the top pieces are secured against movement.

4. Charpoys will be dismantled before despatch and the parts of each charpoys will be tied together. In the cases of strung charpoys the legs and end rails will be removed and placed in the middle of the stringing, the side rails will not be removed. The whole will then be rolled up and tied securely with the tightening rope.

5. The precautions in para 3 will be observed in principle when despatching furniture by road. Charpoys must be dismantled before despatching even when the distance to be removed is small.

(REFERRED TO IN PARA 14 a. (4) OF RI 348)
FORM OF SCHEDULE 'A' TO BE ANNEXED TO PPR-2008
SCHEDULE OF ITEMS

Ser	MES Sch.... Item No	E in C's Drg No	Description of Articles	A/Unit	Qty	MES Sch... Rate	Amount
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)

Add /Deduct CPC	Total	Tk:
		Tk:
	Grand Total	Tk:
	Say	Tk:

ROUTINE INSTRUCTION NO 349/2008
MAINTENANCE OF FURNITURE

Provision and Expenditure of Funds

1. Funds for the upkeep and repair of all furniture for Army/BN/BAF are provided from Head of Account as mentioned in RI-347, Annex - B.
2. Garrison Engineers will demand funds for the maintenance of furniture in the Annual Budget Forecast at the rate of 10% percent of the capital cost of all furniture of current and obsolescent patterns upto the authorised scales as shown in the Annual Furniture Return (BAFW-2219). Funds may be demanded at the same rate for all obsolete, or surplus furniture issued free or on hire to individual not entitled to furniture and for furniture which has been presented by Red Crescent society to military hospitals.
3. Although the allowance for the maintenance of furniture is calculated at 7¹/₂% percent of the capital cost, it is not intended that the funds allotted should be spent at this rate. It is, moreover, permissible to demand additional funds, if they are required. The repair of furniture is governed by the same rules as those laid down in works procedure. The object, as in the case of the maintenance of buildings, is to maintain the furniture in a state of good repair with the maximum of efficiency and economy. Some articles such as kit boxes, chairs and wooden charpoy frames require frequent repair while other articles seldom require repair at all. Expenditure must be regulated by actual needs.
4. Funds will not be expended on the repair of surplus or obsolete furniture, except articles which have been issued on hire, nor will funds be expended on the repair of furniture which is beyond economical repair. As a guide, it may be taken that repair is not economical, when the cost exceeds one half of the cost of the articles, but this must not be regarded as a hard and fast rule.
5. Expenditure on repairs requires an allotment of funds, but as a maintenance work, expenditure may be incurred monthly in anticipation or an allotment at a rate not exceeding one twelfth of the expenditure incurred during the proceeding financial year.

Repair Estimate

6. Immediately before the beginning of each financial year, the SDO will prepare and estimate of the cost of repairs to furniture under each head of account (See Annex-B to RI 347). These estimates will be prepared on “Abstract of Estimate for small works” (BAFW-1796) and will be sanctioned by the Garrison Engineer or if beyond his financial power, by the CMES. The details to be given in the estimates should be as under :

- a. Labour by trades, including chowkidars employed in the F&S yard and their monthly rates of pay.
- b. Materials required per month.
 - (1) From bazar supply contractor.
 - (2) From stock
- c. Re-caning (a lump sum)
- d. Transport charge (See para 22 of RI 347) (a lump sum).

Method of Repair

7. Furniture will be repaired by directly employed labour and not by contract, except in the case of re-caning/repair/repainting steel furniture, washing of carpet, curtains and certain special furniture for which necessary Tradesman/Technicians are not exists in the concerned GE/AGE's. The work will be done in the F&S yard except for very minor repairs, which can be conveniently executed in the course of not more than a few hours without moving the furniture from its location.

Repair by DEL

8. Casual and temporary labour will be engaged, employed and paid according to the rules laid down in paragraphs 133 to 135 MES Regs and to such orders, as may be issued by the Engineer-in-Chief from time to time. Separate casual pay bills and muster rolls will not be used for each head of account to which the expenditure is debitable but the expenditure will be allocated on the bill or muster roll to the various heads of accounts.

9. Materials will be drawn periodically from Divisional stocks or obtained from the Bazar supply Contractor of the Division and will be held on the store-in-hand ledger (BAFW-2223). They will then be drawn as required by indent (BAFW-2305) according to the normal procedure.

10. **Repair of Furniture by DEL**

a. The Supervisor F&S will keep records of articles repaired at site and of articles received for repair and repaired by DEL in the F&S yard. Articles re-caned will be shown in the Measurement Book (See para 12). The records kept in the F&S yard will consist of the under mentioned registers. The furniture repair Register consisting of two parts:

- (1) Form-1-Articles received for repair during the month.
- (2) Form-2 Articles repaired by DEL during the month.

Note:

Instructions for maintaining this register are given in paras 22 to 24 of RI No 351.

b. The Register of Furniture Deposited, in which will be recorded all articles, which are retained for repair instead of being immediately exchanged. Instructions for maintaining this register are given in para 25 of RI No 350.

11. At the end of each month the Supervisor, F&S will prepare a statement of articles repaired by DEL in the form given in Annex – ‘A’ which he will compile from his record of articles repaired at site and from form 2 of the Furniture Repair Register. The SDO will attach this statement, together with a copy of all units Repair and Exchange Vouchers (See para 16 of RI No 353) to the CP, bills and or muster rolls when forwarding them to the Unit Accountant for payment. He will also attach a list of materials used, compiled from the indents by which they were drawn from stores in hand.

Re-caning Contracts

12. Recanning contracts will be concluded as per PPR-2008 by using STD, PW-1. A full specification will include in the contract documents. The specification will be included a requirement that the work will be equal to a sample which will be kept in the F&S yard. This sample should be a wooden frame caned to specification and sealed and signed by the Garrison Engineer. All works done will be recorded in the Measurement Book (BAFW-2261) in exact conformity with the instructions given in that book Work orders will be given to the contractor and bills will be prepared and submitted as in para 17 & 18 of RI No 348.

14. **Washing/Cleaning of Curtain & Carpets.** Washing and cleaning of curtain and carpet may be carried out by MES every six months interval in case of curtain and two years interval in case of carpet from respective budget head of accounts.

Authy:

AHQ, E in C's Branch Wks Dte Ltr No 802/Rev/81 date 12 Oct 2005.

Note:

1. The allowances under these various heading will be based on experience but the total amount of the estimate should not exceed the amount of the funds, which are likely to be allotted.

This supersedes Routine Instructions No 3002 of 1990.

(REFERRED TO IN PARA 11 OF RI NO 348)

STATEMENT OF FURNITURE REPAIRED DURING
THE MONTH OF200

Station

Ser	Name of Articles	Balance in godown not repaired on 1 st day of month	Received in godown during the month BAFW-2414 (attached)	Total of balance and received	No not for repair by DEL		Net total for repaired	No repaired during month in	Balance in godown not repaired on last of month	No repaired at site during month	Total repaired at site and in godown during month
					No : for re-canning only	Beyond economical repairs					
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(k)	(l)	(m)

Signature
Designation

ROUTINE INSTRUCTION NO 350/2008
PROVISION AND MAINTENANCE OF CHARPOYS

Provision

1. The standard pattern of charpoy is the charpoy (CR/IP/Double decker) strung with Newar.
2. When initial issues of charpoy are made units, the charpoy will be strung to specification but they will not necessarily be newly strung.
3. When charpoy (CR/IP/Double Decker) are handed into the MES for repair or renewal of the frame, the unit will first remove the string, unstrung frames will be issued in place of those handed in & the restring will be done by the unit. When charpoy are returned to MES as surplus to requirements, they must be serviceable and strung to specification, if they are not strung to specification, or if immediate renewal of the string is necessary, the unit will be required to renew the string or else barrack damages will be paid by the unit.
4. Charpoy (CR/IP/Double Decker) required as new supplies on account of increase of accommodation or increase in scales, will be purchased completely strung. In the case of renewals complete charpoy will be purchased. Expenditure incurred by the MES in providing completely strung charpoy and in providing and repairing frames is chargeable to the same heads of account as other B&H furniture.
5. The MES have no responsibility in the handing and taking over of charpoy (CR/IP/Double Decker) between units except the following:
 - a. Issue of fully strung charpoy (CR/IP/Double Decker) to the incoming unit in case the number handed over by the outgoing unit is less than the authorised scale.
 - b. Receipt into store of charpoy (CR/IP/Double Decker) surplus to the authorised scale of the incoming unit.
 - c. Technical advice as to the condition of the charpoy which are being handed over.
 - d. Provision of charpoy strung to specification to which units may refer as a pattern.

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- e. The MES will not take over charpoys from the outgoing unit and hand them over to the incoming unit, or arbitrate in disputes between units, or assess any payment to be made by one unit to the other, or carry out any repair or renewal of the stringing.
6. In the F&S yard at every station a charpoy (CR/IP/Double Decker) will be kept fully strung to specification. A sealed label will be attached to the string on which will be written the specification and which will be signed by the Garrison Engineer. This charpoy will be available for inspection by units at all times during working hours, and it will be produced if called for when one unit is taking over charpoys from another.
7. Responsibility for replacing of newar rendered unserviceable through fair, wear & tear. Rest with the MES.

This supersedes Routine Instructions No 3003 of 1990.

ROUTINE INSTRUCTION NO 351/2008
RECORDS AND RETURNS

1. **Records are Required to be kept at every Station in order to.**
 - a. Show what furniture is authorised for the station.
 - b. Show and account for the furniture held in the station.
 - c. Show the physical location of the furniture.
 - d. Show what furniture has been repaired.
 - e. Show the disposal of unserviceable furniture.

2. The responsibility of the maintenance of records rest with the SDO in a combined furniture and stores Sub-division and in stations where there is no SDO, F&S. The maintenance of station furniture records may be entrusted to the Supervisor F&S except the Furniture Register which SDO will maintain in his own office.

3. **Returns are Required to be Submitted in order to.**
 - a. Inform CsMES of the quantity and value of the furniture held in each Division, in order that surpluses and deficiencies may be adjusted and that funds may be demanded for the maintenance and renewal of furniture and for the provision of furniture, required to complete authorised scales.
 - b. Inform DW&CE of the surpluses and deficiencies in each CsMES area, so that he may order any transfer that may be desirable and to give him a general picture of the furniture position Details of the returns required are given in paras 30 to 38 of this RI Returns are not required in respect of MES Office furniture.

4. In all reports and returns, furniture will be shown in the order given below:
 - a. Barrack and hospital furniture of MES supply in MES Schedule of Rates.
 - b. Barrack and hospital furniture of MES supply of obsolescents and obsolete patterns, not included in MES Schedule of Rates alphabetical order.
 - c. Special pattern of furniture of MES supply, in alphabetical order.

5. Articles will be described exactly as in List of Articles. The description of articles not included in these publications will follow the standard method of description e.g. a steel filing cabinet with four drawers will be described ‘‘cabinet, filing, steel, 4-drawers’’ or a special type of desk as ‘‘table, office, officers’’ 1.80m x 1.22m with fitted trays.

Records

6. A list of the records which are to be kept with a note explaining the purpose of each record, is given below. Details of each record are given in the paragraphs immediately following:

Ser	Name of Record	No of BA Form	By whom kept	Purpose of the Record	Remarks
1.	Register of Furniture Authorised for each lines etc	W-2412	Supervisor F&S	Shows the furniture authorised for each lines, set of quarter, hospital, installation, etc from it the station register of authorised Furniture (Serial-2) is compiled.	Not required special technical and office furniture or for MES office furniture.
2.	Station Register of Authorised Furniture	W-1811	Supervisor F&S	Shows the quantities of each articles of furniture authorised for the station.	-Do-
3.	Divisional Register of Authorised Furniture	W-1181	SDO of the Headquarters station	Shows the quantities of each articles of furniture authorised for the MES Division when it comprises more than one station	-Do-
4.	Station Furniture Register	W-2279	S.D.O	Records the quantities of each articles of furniture held in the station and all issues and receipts.	Required for all classes of furniture.

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Ser	Name of Record	No of BA Form	By whom kept	Purpose of the Record	Remarks
5.	Unit Furniture Distribution Ledger	W-1814	One copy by Supervisor F&S one copy by the Unit	Records all transaction regarding issues and receipts of furniture between the MES and the unit from it the station Furniture Distribution Ledger (Serial 6) is compiled	-Do-
6.	Station Furniture Distribution Ledger	W-1814	Supervisor F&S	Shows the distribution of all furniture held in the station.	-Do-
7.	Furniture Repair Register	W-1814 (adapted as in Annex A)	Supervisor F&S	Records all articles received for repair and all articles repaired by DEL in the F&S yard	One register in each case for all classes of furniture
8.	Registre of Furniture Deposited	Blank Register (ruled as in Annex B)	Supervisor F&S	Records furniture retained for repair in the F&S yard and not immediately, exchanged and the date handed back to the unit	-Do-
9.	Register of Unserviceable Furniture	W-2412	Supervisor F&S	Records the disposal of all furniture considered beyond economical repair	-Do-

Register of Furniture Authorised for Each Lines, etc (Serial No 1)

7. This register has been introduced to standardise the method by which the entitlement of furniture of each lines, set of quarters, hospital installation, headquarter office, etc is establishment and to facilitate the compilation of the station Register of Authorised Furniture (Serial No 2). It is not required to be maintained for MES office Furniture. The furniture authorised in a station based on the numbers of officers. ORs, Clerks, etc authorised to be accommodated in each building. This register, therefore, does not take account of actual strength and requires no amendment on change of occupation, except when there is a change in the type of unit and the scales in B&H furniture schedules differ.

8. Separate pages in the register will be allotted to each line, etc and all entries will be made in ink. A separate column will be used for each article of furniture and a separate line will be used for each building except that buildings which provide indential accommodation e.g. SMBK. May be grouped together. The different articles of furniture will be totaled, the totals being carried forward to the Sta Register of authorised furniturre. Amendments will be required and will be made whenever the accommodation in the lines, etc, increased or reduced. Minor corrections may be made by striking out existing figures and entering fresh ones but space shuld be left at the end of each line for any additional buildings or for substituting fresh entries for existing ones. All corrections will be initialled by the SDO.

Station Register of Authorised Furniture (Serial No 2)

9. This register shows the total quantity of each article of furniture authorised to be held in each station i.e. the authorised scale for the station. It is the basis on which is compiled the annual Furniture return (see para 30) and hence for the provision of funds for the maintenance and renewal of furniture and for the provision to complete scales.

10. A separate page is allotted to each article of furniture. The quantities authorised for each lines, etc, will be entered separately, one below the other and will be totalled at the foot of the page. The quantities will be taken from those given in the Register of Furniture Authorised for each lines (serial No 1) and no other quantities will be added to allow for temporary issues to troops under canvas. for issues to officer on hire etc

In the case, however, of these articles for which a reserve is authorised by Appendix A of B&H furniture Schedules. the quantity authorised will be entered at the foot of the page immediately above the total. All entries will be made in ink. Corrections will be made by striking out existing entry and inserting the new one. All corrections will be initialled by the SDO.

Divisional Register of Authorised Furniture (Serial No-3)

11. This register is maintained at the headquarters station of a Division, in which there is more than one station. It serves the purpose of a station Register for the headquarters station as well as showing the total quantities of furniture authorised for the Division. It is compiled and maintained in exactly the same way, as the station Register of Authorised furniture (Serial No 2) in so far as the headquarters station is concerned i.e. the quantities authorised for each lines, etc, and the authorised reserve where applicable are entered and totalled. Room is left, however, below the station total for the quantities authorised for each out-station, these are entered, each one separately, below the total the headquarters station and the grand total for the Division is thus established and entered at the foot of the page.

Station Furniture Register (Serial No 4)

12. Account is kept in this register of the furniture in the station as a whole. All receipts and issues affecting the quantities of furniture in the station only are recorded, issues to and receipts from units are not recorded in this register. Receipts include purchases of new furniture, receipts and transfers from other station, issues include transfers to other station and articles written of for any reason whatever.

13. The authorised from of this register BAFW-2279 is the same as that authorised for the accounting for stores and tools & plant, and it is maintained in the same manner. Each article requires a separate page, on which are recorded the plan No and designation of the article and its prices (See para 11 of RI. No 347) and all issues, receipts and balances remaining. All entries will be in ink and the Voucher No and date will be given in respect of each transaction. They will be initialled and dated by the person making the entries.

Unit Furniture Distribution Ledger (Serial No 5)

14. This form is intended for use as a station, as well as a unit ledger, when used as a unit ledger the lower heading of the first column, i. e. "distribution by units" is redundant and should be struck out.

15. When furniture is first issued to a unit, or when a unit takes over furniture from another unit, the Supervisor. F&S will prepare a unit distribution ledger in duplicate. One copy is given to and is retained by the unit. The designations of the articles issued are written in the headings of the column and the number of articles issued are written along the first horizontal line in their respective columns. The issue Voucher No and date are entered in the first column. As many inner sheets, as are likely to be required, will be inserted before making any entries. Unit Distribution ledgers will be prepared for furniture issued to individuals in the same way, as for issues to units. Whenever articles of furniture are subsequently issued to or received from the unit, the quantities concerned are written on successive lines in the appropriate columns, the issue or receipt Voucher No and date being given in every case. The entries are made in ink, issues to the unit being recorded in black and receipts from the unit in red. After the first entry, subsequent entries in the units copy of the unit Distribution ledger will be made by the unit.

16. All entries in the unit Distribution ledger of issues to and receipts from a unit, and the corresponding entries in the station Distribution ledger (serial No 6) will be made on the same day that the transactions have occurred.

17. At every periodical inspection, the unit and MES copies will be compared and any discrepancies will be reconciled against the totals and dated on the outside as directed in paras 6 and 7, RI No 353.

18. Unit distribution ledgers (one copy only) will be maintained to show godown balances i. e. quantities of furniture which have not been issued to unit. A separate ledger will be used for the F & S yard and for each other place, if any in which furniture is stored. All issues and receipts which effect the quantity held on charge by units will be shown as they occur, no entries will be made in respect of furniture exchanged for articles of the

same pattern and furniture deposited by units for repair the ledger showing godown balances in the F&S yard will, therefore, show all articles in the yard, whether in store or being repaired, except articles shown in the Register of Furniture Deposited (serial No 8). The ledger showing godown balanced in the F/S yard will be balances in the F&S yard will be balance weekly, but ledgers showing balance in other godown need only be balanced monthly, unless and receipts are frequently made. When lines are vacated and remain vacant, it is not necessary to prepare a fresh unit Distribution ledger. The MES copy of the Unit Distribution ledger in use, at the time the lines were vacated will continue to be used until the lines are re-occupied.

Station Furniture Distribution Ledger (Serial No 6)

19. The object of this ledger is to show the distribution of all the furniture in the station. BAFW-1814 is intended for use as a station, as well as a unit distribution ledger, but it is usual, for reasons which will be obvious from the method of maintenance, not to use the printed form but to prepare a copy of the form on stout paper and on a large scale. The station Distribution ledger will be kept in the Supervisor's own office and entries must either be made by him personally or must be carefully checked by him as soon as they are made. The ledger, When not in use will be kept under lock and key to avoid any unauthorised amendments.

20. In the station Distribution ledger the quantities of the furniture held by each unit, individual etc, or in each lines, if vacant of quarter, as shown by the various unit Distribution ledgers are entered along each successive horizontal line. It is impossible to enter receipt from, and issues to units etc, instead whenever a receipt or issue is made the number shown as held by the unit, etc, is corrected. All figures must, therefore, be kept in pencil of medium harness, and corrections are made by erasing the previous figures and inserting the new one. In the first column, the names of the various lines, headquarters offices, furnished quarters etc, which are permanently furnished, will be entered in ink, the names of units individuals etc occupying them will be added in pencil, All entries in respect of lines, quarters etc not permanently furnished, will be made in pencil. Sufficient inner leaves must be allowed for additional permanent and temporary entries. Each sheet will be totaled and totals will be carried forward to the last sheet i.e. the uppermost inner sheet immediately above the "Total" on the last sheet, which will be amended to read "Totals

on charge" will be shown the number of articles in the F&S. yard (in store and, under or awaiting repair) and separately, in any other furniture godowns.

21. The figures in the station Distribution ledger will be corrected whenever, and at the same time as, any issues and receipts are made in a unit Distribution ledger station and unit ledger will be frequently checked against each other to ensure that the corresponding entries agree. Checks will also be made to ensure that " Total on charge" agree with the balances in the station Furniture Resister (Serial No 4).

Furniture Repair Register (Serial No 7)

22. Although it has been customary to maintain a record of furniture handed in by units for repair and of furniture repaired, no instructions have been issued regarding the form in which it shall be kept. It will henceforth be maintained in the manner shown in Appendix 'A'. No special Army Form has been introduced. The register will be kept on BAFW-1814 suitably adapted, on a monthly basis, and at the end of the month two forms see below, will be filled together.

23. **Form I.**

a. Articles received for repairs during the month. The various articles will not as is the general rule, be inserted in the column headings in alphabetical order. Articles of which there is a balance brought forwarded from the previous month, will be entered in alphabetical order, but articles of which there is no balance brought forward will be entered in the order in which they are received for the first time during the moth. One horizontal line will not be allotted for each unit, the figures in the horizontal line represent the quantities received from any one unit at any one time and the same unit will appear in the return as many times as furniture is received from it.

b. On the first day of the month balances of furniture awaiting or under repair, excluding recaning only, will be transferred from Form 1 for the previous month, thereafter, immediately and furniture is received the Supervisor, F&S will enter the reference No and date allotted by him to the Repair and Exchange Voucher not the units Noand date in the second column and the quantities received in the appropriate columns. All articles included in the repair and Exchange

voucher whether exchanged or not, damaged beyond repair or for re-canning only, and whether or not barrack damages are to be charged, will be entered in Form-1.

c. At the end of the month all columns will be totaled. To the totals will be added any articles, which have been entered on a Transfer Expense Voucher during a previous month as unserviceable, but which have been struck off the voucher during the current month as repairable, the Voucher No or Nos and date will be given in the second column. Articles requiring re-canning only and articles included during the month in a Transfer Expense Voucher as unserviceable again, giving the No and date of the Voucher will then be deducted. Finally, the quantities repaired during the month will be transferred from Form 2, and the balances to be carried forward to the next months register will be calculated and entered in the bottom line.

24. **Form-2.** Articles repaired by DEL during the month. Articles will be entered in the column headings of this form in the same order as in form 1. Entries will be made in the appropriate columns on each day that articles are passed by the Supervisor, F&S as properly repaired. Articles re-canned will not be included. An article requiring both repair and re-canning will be entered, when it has been passed as ready for caning on the last day of the month the column will be totalled and the totals will be transferred to form 1, as mentioned above.

Register of Furniture Deposited (Serial No 8)

25. The register will be kept in a blank register which will be ruled, and in which entries will be made in the manner shown in Appendix B. The Supervisor, F&S will record in this register all articles deposited for repair by the unit i. e. repairable articles which cannot be immediately exchanged for serviceable articles and which are retained for repair. Articles damaged beyond repair will not be entered. The register will also record the return to the unit of the articles returned. A separate page or group of pages will be allotted to each unit. Whenever articles are retained for repair an entry will be made showing the number of articles and the reference No and date of the repair and Exchange Voucher, on which the articles were sent for repair. As articles are repaired and issued, or articles of the same description become available and are returned to the units, an entry will be made in one of the " returned to unit" columns and the unit will initial and

date the entry. If articles are replaced by articles of a different description, or if the unit leaves the station or for any reasons, does not require, the return of articles deposited, the quantity not returned and the corresponding receipt No and date will be entered in the " not returned " columns when the disposal of the whole quantity of furniture shown as deposited in one line of the register, has been recorded, all entries will be ruled through by a red ink line to show that the transaction is complete (this line has not been shown in Appendix H). All Voucher Nos. will be those of the unit and not those of the Supervisor. F&S.

Register of Unserviceable Furniture (Serial No 9)

26. This register has been newly introduced. Its necessity and purpose are given in para 5 of RI 356. Only one register will be maintained in each station, it is not necessary to maintain a separate register for each class of furniture.

27. The register will be maintained on the BAFW-2412. Whenever furniture is considered by the SDO to be beyond economical repair, the particulars of the furniture and the No and date of the Transfer expense Voucher will be entered in the first four columns of the register. A fresh page will be started at the beginning of each month. The remaining columns will be filled in as the transactions occur. When all the articles entered in any one month have been finally disposed of and the register completed in respect of that month, a diagonal line will be drawn across the page.

28. The register will be inspected by the Garrison Engineer not less frequently than once in three months in order that he may satisfy himself, that no undue delays are occurring in the writing off and disposal of unserviceable furniture or, if there are delays, that he may take steps to remove them.

Returns

29. There are only two returns, peculiar to furniture and both are submitted annually. The returns required, with a brief note on their purpose, is given below. Details regarding the compilation and submission of each return are given in the paragraph immediately following.

Furniture Return

Ser	Name of Return	No of BA Form used	Channels & date of submission	Purpose of the Return
1.	Annual Furniture Return	W-2219	SDO To GE CMES by 15 October annually with the annual Budget Estimate Forecast	<p>a. To show surpluses and deficiencies in each Division and to enable Cs MES to make the necessary transfer between Divisions to adjust them.</p> <p>b. To show the value of furniture held in each division and hence to calculate funds required for maintenance and renewals.</p> <p>c. To enable funds to be demanded to complete scales.</p>
2.	Annual Return of Surplus & Deficient Furniture	W-2411	CMES to DW & CE by 25 Dec annually	<p>a. To show surplus and deficiencies in the Cs MES area and to enable DW&CE to make any transfers between areas which are desirable.</p> <p>b. To give a general picture to DW&CE of the furniture situation in his jurisdiction.</p>

Annual Furniture Return (Serial.No 1)

30. This return will be prepared annually by the SDO on BAFW-2219 will be submitted by the GE to the CMES at the same time as the annual Budget Estimate forecast, i.e. by 15 October. One copy only is required. Since the return gives the value of all furniture held on charge, and hence is the basis on which funds are demanded for maintenance and renewals and for completing scales, accuracy in preparation is essential. The return in respect of MES office furniture will not be submitted on this form (see para 21 of RI 355)

31. All standard articles of furniture are printed on the form under their correct designations at the time of printing. In cases where the designations has been changed by amendment to or by the publication of a revised list of articles, the form will be amended when the return is prepared by crossing out the former designation and inserting the revised one, other wise no alteration to or deletion, of the printed designations will be made. Any additional articles will be entered in alphabetical order at the end of the printed designations. Obsolescent patterns of furniture will be included in the return, but not obsolete patterns. Articles of furniture supplied as free gifts to hospitals by the Red Crescent Society, will be entered at the end of the form after all other articles. Their value will be totaled separately.

32. Articles will be valued as in para 11 of RI. No-347.

33. Cs MES will from the information given in these returns, order the transfer of articles surplus in one Division to make good deficiencies in other Division. If deficiencies can not be made good by surpluses of articles of the same pattern, articles of similar or suitable patterns which may be surplus will be transferred.

34. Cs MES will check from these returns that no furniture which is not surplus in their areas is issued on hire, and will order the withdrawal of any furniture which is not surplus. They will also use the returns to check that surplus furniture is taken into account in any project estimates that may be prepared in which furniture is included.

35. Cs MES are not required to submit this return to E-in-C.

Annual Return of Surplus and Deficient Furniture (Serial No 2)

36. This return has been newly introduced and will be submitted by Cs MES to DW&CE annually in duplicate. It is compiled from the annual furniture returns received from Divisions and will reach DW&CE by 25th Dec. Returns in respect of MES office furniture will not be submitted.

37. The return intended to show surpluses and deficiencies in each Cs MES area, the figures shown will therefore, be those which remain after balancing surpluses and deficiencies in all Divisions. Only those articles of which there are surpluses and deficiencies will be shown, and obsolete patterns and unserviceable furniture will not be shown. Nil returns are required. The certificate on the return that the annual verification of furniture has been carried out, must be signed by CMES.

38. On receipt of these returns DW&CE will order transfers of furniture between Cs MES. areas, as he may consider desirable.

Note:

1. Detail of the records which are required to be kept for the above purposes and of their maintenance are given in this Instruction. In addition, store-in-hand ledgers to account for materials obtained for the repair of furniture and from condemned furniture and Registers of Articles in use to account for tools held on charge for repairing furniture will also be maintained at every station. These will be kept on BAFW-2223 and BAFW-2279 respectively.

This supersedes Routine Instructions No 3005 of 1990.

SPECIMEN ENTRIES IN THE FURNITURE REPAIR REGISTER
FORM 1 –FURNITURE RECEIVED FOR REPAIR DURING
AUGUST 2007

Ser	Unit	R. & E. Vr. No and Date	Almirah large with shelves	Box soiled linen	Charpoy, iron pipe	Chair, cane bottomed without arms	Chair, cane bottomed with	Table, office, clerks	Trestle, store room	Receptacle, large	Table, 1.524Mx0.864M	Frame mosquito net
1.	Balance		2	4	3	1	2	3	3	2	-	-
2.	5/1 4E, Bengal	R/110 1/8/89	-	10	12	-	-	-	-	-	-	-
3.	Bde HQ	R/111 5/8/89	-	-	-	4	-	-	-	-	-	-
4.	1/15 2 nd E. Bengal	R/112 7/8/89	-	-	-	-	-	-	-	2	2	-
5.	322 Fd, Arty Coy	R/113 10/8/89	2	-	-	-	3	-	10	1	-	2
6.	5/19 E Bengal	R/114 15/8/89	3	4	-	-	-	3	-	-	2	-
7.	etc											
8.	etc											
9.	Total for repair		14	22	35	18	11	12	23	13	6	8
10	Add articles write off not sanctioned	Exp Vr 76 29/7/89	1	-	-	-	-	2	-	-	-	-
11	Grand Total		15	22	35	18	11	14	23	13	6	8
12	Deduct article for caning only		-	-	-	4	2	-	-	-	-	-
13	Balance		2	4	3	1	2	3	3	2	-	-
14	Deduct articles put on Exp Vr. for write off	Exp Vr 77 12/8/89	-	-	16	2	-	-	3	2	-	-
15	Total deduction				16	6	2	-	3	2	-	-
16	Repaired during the month	from form 2	12	22	18	10	7	12	18	10	4	8
17	Balance for repair C.F. to next month		3	-	1	2	2	2	2	1	2	-

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* Not necessary if no articles proposed for write-off have been refused sanction.

1. Not necessary if no articles for caning only and no article put Expenditure Voucher for write-off. If more than one Expenditure Voucher prepared during the month they may not be entered separately but give references to all Expenditure Voucher.

ANNEX - A (Contd) TO
R.I NO- 351/2008

SPECIMEN ENTRIES IN THE FURNITURE REPAIR REGISTER
FORM – 2 ARTICLES REPAIRED BY D.E.L. DURING AUG 89

Ser	Date repaired	Almirah large with shelves	Charpoy, iron pipe	Chair, cane bottomed with arms	Chair, cane bottomed without arms	Table, office, clerk	Trestle, store room	Receptacle, large	Table, 1.52 Mx0.864M
1.	2-8-07	2	-	-	-	2	2	-	-
2.	3-8-07	-	2	-	-	-	-	-	-
3.	4-8-07	-	2	-	2	1	-	2	-
4.	5-8-07	-	-	-	-	-	-	-	-
5.	7-8-07	-	2	1	-	1	-	-	-
6.	9-8-07	-	3	2	-	1	-	-	-
7.	10-8-07	-	-	1	-	-	1	-	2
8.	12-8-07	-	3	-	-	1	-	1	-
9.	15-8-07	1	1	1	-	-	2	1	-
10.	16-8-07	1	1	-	-	-	3	-	-
11.	etc	-							
12.	etc	-							
Toal repaired C.O. to Form -1		12	18	10	7	12	18	10	4

SPECIMEN PAGE OF REGISTER OF FURNITURE DEPOSITEDFOR THE MONTH OF AUGUST 2007

Ser	Name of Unit	Receipt Voucher No & Date	Articles Deposited								
			Chair, Universal	Chair, Easy	Bed, Single	Safe, Meat & Milk	Table, Dining, Ico's/OR's	Table, Writing small	Trestle, Store room	Curtains	
1.	1 st E. Bengal	RV/FS/01 dt..	2	3	1	1	1	-	-	-	
2.	Sta HQ	RV/FS/02 dt..	4	-	-	-	2	3	2	-	
3.	SSD	RV/FS/03 dt..	1	1	-	4	2	6	1	-	
4.	12 Engrs	RV/FS/04 dt..	8	-	1	1	6	-	1	-	
	etc									-	
	etc									-	
5.	Total end of the month August 2007		15	4	2	6	11	9	4	-	
6.	Proposed write-off Expense Voucher No – date -----		15	4	-	6	11	9	-	-	
7.	Qty balance at the end of the month		-	-	2	-	-	-	4	-	
<u>FOR THE MONTH OF SEPTEMBER 2007</u>											
1.	Balance from previous month		-	-	2	-	-	-	4	-	
2.	46 BDE	RV/FS/01 dt..	12	8	-	-	-	1	-	-	
3.	COD	RV/FS/02 dt..	3	2	-	-	-	-	-	-	
4.	464/3 D type	RV/FS/03 dt..	-	2	2	-	-	-	-	-	
5.	15/2 B type	RV/FS/04 dt..	-	-	-	-	-	-	-	80 part	
	etc									-	
6.	Total end of the month September 2007		15	12	4	-	-	1	4	80 part	
7.	Proposed write-off Expense Voucher No – date -----		15	12	4	-	-	1	4	80 part	
8.	Qty balance at the end of the month		-	-	-	-	-	-	-	-	

CHAPTER-VII

ROUTINE INSTRUCTION NO 352/2008
ISSUE OF FURNITURE

1. The provisions of this Instruction apply to all issues of furniture to units and individuals. The special conditions governing the issue of furniture to officers and to the hiring out of furniture are, however, dealt with in RI. No 354.

Issues in Excess of Authorised Scales

2. a. Furniture will not be issued in excess of the scales authorised in B&H (Furniture). Schedule or specially authorised as paras (5 & 6 of RI. No 347 without the previous sanction of the Government, except in the following circumstances. Application for Government sanction will be made by the unit concerned through staff channels to service HQ concerned.
- b. Formation Commander may authorise the issue on loan of furniture, if available, for purely temporary purposes for bonafide military use. If the period for which it is required is likely to be extensive or become permanent, immediate application must be made by the unit, etc, through staff channels for the sanction of the Government. Under this provision such articles of furniture as may be available may be issued for units of the Defence Services for use at training camps, staffs or regimental exercises, manoeuvres, Examination etc
- c. An O.C Station may, if certified necessary by the medical authorities, and with concurrence of the C.F.A. if expenditure is involved, order the supply of charpoys to troops in emergency camp, such as a cholera camp whose charpoys have been left in an infected building (see also para 4). Any infected charpoys will be disinfected or destroyed under the direction of the medical authorities; a loss statement will be submitted by the S.D.O in respect of any charpoys so destroyed, in accordance with the procedure in para 20 c. of RI No 353.
- d. Charpoys may be issued from reserve or surpluses to troops in temporary camps, if this is cheaper than supplying straw or if, for any reason, the use of straw is undesirable.

e. If on account of shortage of accommodation in peace station, units are billeted in tents, the O.C. Station may authorize the use of furniture, from available Barrack Furniture on Pro-rata basis for so long as the unit remains under canvas.

Distribution of Furniture

3. Furniture once placed in lines or buildings except for temporary purposes will be regarded as an integral part of those lines or buildings. It will not normally be removed, except temporarily or when exchanged for other articles and will never be removed for the sole purpose of storing it elsewhere, should the buildings become unoccupied. Should a line or a number of buildings in the same vicinity become unoccupied, furniture should, however, be concentrated into one or more adjacent buildings in order to reduce the cost of chowkidars. Transfers of furniture from one place to another within a station may be ordered by the GE or the SDO acting on his behalf, in order to adjust surpluses and deficiencies against the authorised scales. If there is a shortage of furniture in a station, the GE may relieve it temporarily by utilising furniture in lines or buildings which are vacant and likely to remain so for a long time, but he will not order such transfers without first consulting the O. C. station.

4. OC's Unit are responsible for the distribution of furniture within their own lines. Furniture issued to units may not be moved from their lines or be transferred permanently or temporarily from one unit to another without the consent of the GE, except when troops move from barracks into emergency camps. Such as cholera camps, unit may then use in camp, under the orders of the O C station, the furniture supplied to them in barracks provided that no furniture is removed from infected buildings and that no expense to the state is caused by moving the furniture.

5. Furniture issued to units will not be moved from one station to another without the written sanction of the formation Commander, who will consult the CMES before authorising the transfer. He will not give his sanction unless the CMES certifies that furniture can not be provided more economically from other sources and that the authorised scale of furniture of the station to which it is proposed to move the furniture will not be exceeded. The sanction will contain a detailed list of all furniture to be moved, copies of which will be forwarded to both station Commanders and to the CMES, The Formation Commander is not empowered to

authorise the transfer of furniture from one formation area to another. Nothing in this paragraph restricts the powers of a CMES to order transfers of furniture within his own area in order to adjust surpluses or deficiencies or to provide additional requirements of furniture from surpluses in other stations.

Handing Over and Taking Over Furniture

6. The furniture will be handed over to/taken over from the O.C. of or an experienced officer appointed to represent, the incoming/outgoing unit. Normally, except when the lines etc, have been or will become vacant, both the handing over and taking over are done at the same time and in fact the representative of the outgoing unit hand over the furniture to the representative of the incoming unit in the presence of the SDO. No physical move of furniture takes place except for the withdrawal of articles surplus to and the issue of articles deficient from, the authorised scale. The detailed procedure will be the same as and when furniture is issued to or taken over from unit occupying vacant lines or vacating them without relief. this procedure is described in para 10 to 13 this RI. As regards the handing/taking over of charpoys, see paras 2 to 5 of RI. No 350.

7. When lines etc, are vacant, furniture upto the authorised scale should remain in the building except for any articles which are required to be withdrawn for repair when therefore, vacant lines etc, are to occupied, it should only be necessary to replace the articles which have been removed for repair. If however, articles have been removed to make up deficiencies elsewhere, the deficient articles should be replaced before the arrival of the incoming unit. If furniture has been concentrated in one or more buildings it is not necessary to distribute it before the arrival of the unit or its advance party. Newly constructed lines, etc will be furnished up to scale before they are occupied for the first time.

8. Procedure for Handing Over to a Unit

a. The SDO will before the time appointed or the handing over prepare two copies of the unit furniture distribution ledger (BAFW-1814) as described in para 15 of RI. No 351, except that the quantities will not be filled in. At the time of handing over, the quantity of each article will be counted jointly by the SDO and the officer representing

the unit and will be entered in ink in both copies of the unit distribution ledger. It is convenient if a third copy of BAFW-1814 be taken to the inspection so that the articles in each room or building may be entered on it and totaled before entering the quantities counted in the unit Distribution Ledgers.

b. After the quantities of all the articles of furniture have been entered on the Unit Distribution Ledgers, the certificate below will be written on the outside of both copies. "Certified that the articles of furniture entered in this ledger have been taken over/handed over correct and in good serviceable condition.

Taken over on (date) Handed over on (date)
(Signature of Officer and unit) Signature of SDO and appointment"

9. One copy of the Unit Distribution ledger will be left in the custody of the unit. If any article is found to require repair or to be unserviceable, it will be removed and will not be counted and entered in the Unit Distribution ledgers unless it can be replaced before the ledgers are completed and signed.

10. The SDO will at the same time prepare in triplicate an issue voucher (BAFW-2096) in which all the furniture taken over by the officer representing the unit will be entered. The details on the reverse will be filled in and signed by both parties and one copy will be given to the unit representative. The SDO will file the second copy with MES copy of the Unit Distribution Ledger. The third copy will not be detached from the pad of forms.

11. **Procedure for Taking Over from a Unit**

a. The furniture will be verified and inspected in the same manner as laid down for the Annual verification and inspection in paras 8 to 12 of RI. 352, except that the certificate referred to in para 9 of RI. No 352 as under:

" Certified that the balances in this ledger have been found correct and handedover/taken over except for the following surplus/deficient items."

Handed over on (Date) Taken over on (date)
(Signature of officer and unit) (Signature of SDO and Appointment)"

b. As regards charging for and collection of barrack damage, see RI. No357.

12. The SDO will at the same time prepare in triplicate a Receipt Voucher (BAFW-2096) on which all the furniture handed over in site by the unit will be entered. The details on the reverse will be filled in and signed by both parties and one copy will be given to the unit representative. The Supervisor, F&S will file the second copy with the MES copy of the Unit Distribution ledger. If any furniture on charge of the unit is in the F&S yard awaiting repair, separate receipt Voucher will be prepared for such furniture.

13. The units copy of the Unit Distribution ledger will be retained by unit and the MES copy will be kept for record by the Supervisor, F&S. If the lines, etc, are to remain vacant, the MES copy will be kept with the other unit Distribution ledgers of the station until the lines are re-occupied and any movement of furniture into and out of the lines while they are vacant will be recorded in it.

Additional Issues

14. If the furniture handed over to a unit is below the authorised scale, the deficiency should be made good at the earliest opportunity without demand from the unit. Demands for furniture may, however, be received from units, such demands will be examined and only those quantities, which are required to complete the authorised scale as shown in the Register of Furniture Authorised for each lines, etc, (BAFW-2413) will be issued. If Furniture in excess of the authorised scale is demanded, the unit will be required to obtain the sanction of the appropriate authority under para 190 or 193 of MES Regulations (See para 2). Issue Voucher and Receipt Vouchers (BAFW-2096) will be prepared in respect of all issues to and receipts from units. They will be prepared as in para 10 and 12 respectively.

Exchange of Furniture

15. Furniture requiring repair will be handed in by the unit at the F&S yard. If possible serviceable articles should be issued in exchange. substitutes being issued if suitable when articles of the same description are not available. A reserve of certain articles is authorised by Appendix

'A' of 'B' &H schedules for this purpose, reserves of articles other than these included in this appendix will not be maintained.

16. Units will forward with articles sent for repair, a furniture repair and exchange voucher (BAFW-2414) in triplicate with columns 1 to 3 filled in. The Supervisor, F&S will check the articles and correct errors, if any, in description and in number and will make appropriate entries in columns 4 to 9 against each article including those, if any, for which barrack damages are to be charged. In respect of the latter, he will also make entries in columns 10 or 11.

17. No entries in the unit Distribution ledgers will be made on account of articles exchanged for others of the same description or retained in the F&S yard for repair. The repair and Exchange voucher serves the purpose of temporary receipt for the latter. Entries in the unit distribution ledgers will however be made on account of articles replaced by articles of a different description or of unserviceable articles, which cannot immediately be replaced. The Supervisor F&S will prepare at once or at the earliest opportunity Receipt and issue voucher (BAFW-2096) in triplicate as under, and will forward two copies to the unit for signature of the OC and return one copy:

- a. Receipt Voucher for
 - (1) articles replaced by articles of another description.
 - (2) articles beyond repair, for which barrack damages will not be charged and which cannot be immediately replaced.
- b. Issue voucher for articles issued in lieu of articles of another description.

18. The Supervisor, F&S. will make appropriate articles in the spaces provided on the upper half of the reverse of the Repair and Exchange Voucher in respect of articles replaced by articles of another pattern and of those which are beyond repair or cannot be replaced and in respect of barrack damages, and will strike out any of the statements which are inapplicable. He will number, date and sign all copies of the Voucher and will return one to the representative of the unit, who brought the furniture for repair together with, if possible, two copies of issue and receipt vouchers, if any. He will not hand over copies of any barrack damage

voucher but will forward them to the Garrison engineer as described in paras 6 & 7 of RI. 357.

19. The Supervisor F&S will also enter the articles retained for repair in the Register of furniture Deposited and will keep a record of furniture repaired in the Furniture repair register (see para 10 of RI. No 348) of the two copies of the furniture repair and exchange voucher, retained by the Supervisor, F&S one copy is required to support the entries in the Registers referred to above and to record the return to the unit of articles retained for repair (see para 20) and the other is required to support the monthly statement of articles repaired (see para 11) of RI No 349). The supervisor F&S will record on these copies, against the articles concerned, the quantities which require re-caning only.

20. When articles retained in F&S yard have been repaired or when suitable articles of the same or of a different description become available, the Supervisor, F&S will notify the unit. When the representative of the unit collects the article, the Supervisor, F&S will enter the description and quantity in the columns provided on the lower half of the reverse of the furniture Exchange and repair voucher and will obtain the dated signature of the unit representative against his entries. These entries will be made on the copy of the voucher which will be permanently retained by the Supervisor, F&S. Entries will also be made in the Register of Furniture Deposited, as described in para 25 of RI. 351.

21. When articles of different description are issued in lieu of articles retained for repair, it will be necessary to amend the quantities in the unit Distribution ledgers and the Supervisor. F&S will prepare Receipt and issue vouchers as in para 17.

Carriage of Furniture within Station

22. The carriage of furniture is the responsibility of the MES in the under mentioned circumstances. MES transport will be used if available or transport will be demanded from the SDO and the expenditure will be charged to the appropriate allotment for the maintenance of furniture. In hill stations application for military fatigue parties will be made to the O.C station, who will arrange for them, if they can be made available, when military fatigue parties are used on charge for them will be debited for MES funds.

RESTRICTED

- a. Furniture required to complete scales prior to or at the time of, handing over lines, buildings etc, to units and individuals to whom the issue of furniture is authorised as an entitlement, including permanently furnished quarters occupied by officer not otherwise entitled to furniture.
- b. Furniture issued after occupation by and furniture moved to and from the F&S yard for repair and exchange while on issue to:
 - (1) Offices and hospitals where no transport is held on charge.
 - (2) Quarters occupied by nursing Officers
 - (3) Permanently furnished quarters occupied by officers not otherwise entitled to furniture.
- c. Furniture moved to and from vacant lines and buildings.

23. The MES have no responsibility, nor will any expenditure be incurred or booked against MES funds for the carriage of furniture within a station in any circumstances other than those mentioned in para 22. Units are responsible for the carriage of furniture issued to or returned by them subsequent to the initial handing over on first arrival or occupation of their lines, and for carriage to and from the F&S yard or other furniture store in connection with the repair and exchange of furniture. Units are also responsible for the carriage of furniture issued to them on loan under para 2.a. or for temporary camps under para 2. b and c Individuals to whom furniture issued on hire and officers falling under para 3 of RI No 354 to whom furniture is issued rent-free will also make their own arrangements for carriage when issued to or withdraw from them or when requiring repairs or exchange, but not when occupying permanently furnished accommodation.

Note:

- 1. The Supervisor F&S will also prepare at once, or at the earliest opportunity, Barrack damage Vouchers (see para 6 & 7 of RI. No 357) if any barrack damages are to be charged.

This supersedes Routine Instructions No 3006 of 1990.

ROUTINE INSTRUCTION NO 353/2008
PERIODICAL INSPECTION AND STOCK TAKING

Periodical Inspection

1. All furniture held on charge by units, formation etc and by individuals will be inspected periodically. The object of these inspections is to take note of what repairs are required and to arrange a repair programme, and to assess barrack damages (See RI No 357). In addition to one inspection each year, a physical check of all furniture held on charge, will be made.

2. Periodical inspections will be made half-yearly and will be completed by last day of June & December. The physical check of furniture will be made during the inspection ending on 30 June; this inspection is termed the "Annual Verification and inspection". Other periodical inspections are termed " Half-yearly inspections". The periodical inspections will be arranged to be completed by 31 December and (to include the Annual Verification) by 30 June.

3. Periodical inspections will be spread over the whole period of three months in order that the paper work resulting from the inspection of one unit, group of officers, quarters, etc, may be completed and arrangements for repairs, replacements etc, of furniture may be completed before the inspection of the next unit, is started, thus ensuring as far as is possible an even flow of work. A definite programme for the whole quarter will be worked out and will be published in station Orders at least two weeks before the first day of the quarter. It must be ensured that no unit, quarters, etc are overlooked, however small the quantity held on charge may be. MES offices will be included in the inspection. The time as well as the date will be given in the programme.

4. Periodical inspections will be made by the SDO in company with a representative of the unit, etc, in the case of officer's quarters, if the officer himself cannot be present, it must be insisted that the quarters, are open at the time of the inspection and that some person representing the officer is present. The GE or an AGE will also attend one periodical inspection during each year of every unit.

Half-Yearly Inspections

5. The inspection consists of:
 - a. A comparison of the MES and unit copies of the Unit furniture Distribution Ledger (see para 15 of RI No 351) and the adjustment of any discrepancies between the two copies.
 - b. Inspection of all furniture.
6. If, when comparing Distribution Ledgers, any discrepancies are found, they will be reconciled by comparing the entries with the relevant issue and Receipt Vouchers and the errors will be corrected. When the Distribution Ledgers agree or after any discrepancies have been reconciled the agreed balances will be entered in ink and against these balances words "Balance on " will be entered in the first column and a line will be ruled across the page immediately below the total. A certificate "Half-Yearly inspection carried out on and ledger balances found correct" signed and dated by both parties will also be entered on the outside of both copies of the Distribution Ledgers.
7. During the inspection of furniture the SDO will note down all the repairs which are required except repairs to the stringing of charpoys which are a unit responsibility. He will decide what repairs, if any, can be done in site and will arrange a programme with the unit representative for delivery of the remaining furniture to the F&S yard for repair. He will also inform the unit what repairs will be treated as barrack damages. He should ensure that his notes agree with those taken by the unit representative.

Annual Verification and Inspection

8. The Annual Verification and Inspection is made in exactly the same way, as a normal half-yearly inspection, but in addition, physical check will be made of the furniture held on charge. The SDO should take with him to the inspection, in addition to the documents mentioned in para 5, copies of unit's Receipt and Exchange Vouchers (see para 16 of RI No 352) so that articles deposited in the F&S yard for repair, may be taken into account.
9. The distribution of furniture held on charge by a unit, etc, is at the discretion of the OC; it cannot be required by the MES that furniture shall be collected in a central place for ease of verification. The furniture will be counted where it stands, and it is convenient that the SDO should take

with him a blank BAFW-1814 on which he can enter the articles counted in each room or buildings. As far as is possible, after the articles in each room have been counted the doors should be locked & the keys should be retained by the SDO until the inspection is over, in order to ensure that furniture already counted shall not be removed to another room. When all that furniture has been counted the total quantities found will be checked and compared with those on the Unit Furniture Distribution Ledger, the balances on which should already have been agreed the certificate endorsed on the Distribution Ledgers will in this case be "Annual Verification and inspection carried out on Ledger balances found correct and agreed with ground balances, except for the following surplus/deficient items".

10. Deficient articles will be charged to the unit, etc, as barrack damages except those which can be adjusted against surplus articles of a similar nature (see para 19 for the method of adjustment in such cases). Surpluses will be brought on charge on Unit Distribution ledgers by the preparation of a Receipt Voucher on BAFW-2096 which will be signed by the SDO and the representative of the unit etc

11. After the annual verification of the furniture held by all units etc, has been completed and the certificates have been endorsed on the Unit Distribution Ledgers, receipt and issue vouchers dated before the annual verification will be preserved and will not be destroyed.

12. It is important that the annual verification of furniture held by any unit, etc, should be completed in one day. If necessary the comparison of the two copies of the Distribution Ledgers and the inspection of furniture, with a view to repairs can be done on another day or days.

13. The above paragraphs have dealt with the verification of furniture held on charge by units, etc It remains to verify godown balances. i.e. balances of furniture not issue to units etc and furniture in vacant lines and buildings to compare balances found by physical check with those shown in the Furniture Register and to establish and regularise surpluses and deficiencies. These will be dealt with under the heading of Stock-taking in the paragraphs immediately following.

Stock Taking

14. Stock taking i.e. the physical check of furniture held in store and not issued to units, can only be done after the completion of the annual

verification and inspection of furniture held on charge by units etc it cannot, therefore, be spread over the whole year, but must be done as soon as any adjustments in the station Furniture Distribution Ledger arising from the annual verification have been completed. All this process must be completed by 30 June.

15. The various steps required in stock-taking are given below in the order in which they are taken:

- a. Stocktaking Reports (BAFW-2221) are prepared in duplicate and all articles shown in the Station Furniture Register are entered in column 2.
- b. All articles, except those written off and a waiting disposal in store and under repair in the F&S yard and in any other store or godowns, will be counted and the quantities found will be entered in column 3 of the Stock-taking Report.
- c. Unit Furniture Distribution Ledgers will be checked with issue and receipt voucher to ensure that all transactions since the annual verification of each unit etc have been entered in them. The balances shown against each unit, etc in the Station Distribution Ledgers will then be agreed with the balances in the Unit Ledger.
- d. The balances shown against units, etc in the Station Distribution Ledger will be totalled and entered in column 4 the Stock-taking report.
- e. The totals in the station Distribution Ledger will be agreed with the balances in the station Furniture Register and will be entered in column 5 of the Stock-taking Report.
- f. Godown balances in the Station Distribution Ledger will be checked to ensure that their sum represents the differences between the sum of the balances shown against units, etc and the totals for the station. The sum of the godown balances will be entered in column 6 of the Stock-taking Reports. This sum may be minus quantity, which may be explained by surpluses having been found at the annual verification and inspection.
- g. Any quantities found to be surplus or deficient i. e. differences between columns 3 and 6 will be entered in column 7.

- h. The entries against each article in the Stock-taking Report will be initialed and dated by the SDO who will also sign the Report.
 - j. Finally steps will be taken to regularise surpluses and deficiencies (see para 18).
- 16.
- a. If it is not possible for the physical check of godown balances to be completed in one day and they are in more than one place, all balances of the same article will be counted on the same day, no matter in how many places they may be stored or how great are the distances between them.
 - b. If the physical check is likely to extend over several days, the order in which the various articles are checked, will be taken at random and will not follow the order in which they are entered on the Stock-taking Report.
 - c. Articles shown in the Register of Unserviceable Furniture (see para 5 of RI No 356) as having been written off, but not yet finally disposed of and articles shown in the Register of Furniture Deposited (see para 10 of RI. No 349) as having been received from units for repair, but not yet returned to the units, will be checked to ensure that they are not produced as part of godown balances.
 - d. Any articles found which is not include in the Stock-taking Report will be added to the report. A careful examination of the Station Furniture Register will then be made to see whether it and any other articles have been omitted from the report by an oversight.
- 17.
- a. Stock-taking will be carried out by the SDO, but five percent of the articles will be checked by the GE who delegate this duty to the AGE. The articles checked will be initialed and dated and the Stock-taking Report will be signed by the GE or AGE. One copy of the Report will be sent to the GE s office for record.
 - b. No furniture will be issued to or received from units from the time that the stock-taking is begun, until the GE or AGE has completed his check.
 - c. The under mentioned points will be observed and noted and action will be taken to rectify any points which are not satisfactory.
 - (1) That all furniture in store is in a good state of repair.

- (2) That all furniture in store is under cover, except for articles made wholly of metal.
- (3) That buildings used for storing furniture are dry, in a good state of repair and free from white ants and other destructive organisms.
- (4) That adequate fire precautions exist.
- (5) That security arrangements are adequate.

18. Surpluses and deficiencies must be regularise immediately after the completion of the annual Stock-taking by:

- a. Adjustments, one against the other of articles of a similar kind and when this is not possible.
- b. Taking on charge article found surplus and
- c. Preparing a loss statement for articles found deficient.

19. It is permissible in the case of furniture to adjust deficiencies against an equal number of articles of a similar kind found surplus. The expression "of a similar kind" must be interpreted reasonably and intelligently. The articles must not only be of the same type e.g a table can only be adjusted against a table and chair, but the price of the articles should be reasonably comparable or the one article should be a reasonable substitute for the other from the viewpoint of issues. Thus, it is not permissible to adjust a table, office, officers and a table 3 × 1-8" against each other. It is also not permissible to adjust a deficient article of current or obsolescent pattern against an article of obsolete pattern.

20. a. Surpluses and Deficiencies of a similar kind are adjusted by the preparation by the Supervisor, F&S of a Transfer voucher (BAFW-2253) in duplicate. The transaction will be described on the voucher thus: "The following articles of furniture which were orginally posted under wrong headings are hereby adjusted on physical verification "The surpluses and deficiencies will be shown by plus and minus quantities. The voucher will be signed by the SDO and will be countersigned by the Garrison Engineer. One copy will be forwarded to the Unit Accountant and the transaction will be shown as issues and receipts in the Station Furniture Register.

b. Surpluses are taken on charge by the preparation by the Supervisor F&S of a Transfer Receipt voucher (BAFW-2253) in duplicate. The words "found surplus on stock-taking" will be entered at the top of column 2 with the description of the articles below. On the authority of this voucher the quantities found surplus will be entered by the SDO in the Station Furniture Register as receipts. One copy of the voucher will be sent to the Unit Accountant and the other copy of the voucher will be kept for record.

c. Deficiencies are adjusted by the preparation by the SDO of a Loss Statement (BAFA-498) in quadruplicate which will be submitted without delay for the sanction of the CFA. At the same time a transfer issue voucher (BAFW-2253) will be prepared in duplicate, on which the words " Loss under sanction by the CFA, vide loss statement Nodated will be written at the top in red ink. One of the vouchers will be sent to the Unit Accountant and the other copy will be kept for record on the authority of this vaucher the SDO will enter the quantities found deficient in the Station Furniture Register as issues.

Note:

1. The SDO will take with him the Unit Furniture Distribution Ledger, copies of all issue and Receipt Vouchers pertaining to transactions which have occurred since the last periodical inspection and a book of Transfer issue/Receipt/Expense Vouchers (BAFW-2253) for use in case any repairs required are classed as barrack damages.

This supersedes Routine Instructions No 3007 of 1990.

ROUTINE INSTRUCTION NO 354/2008
FURNITURE FOR OFFICERS' QUARTERS, MESSES, AND
HIRING OUT OF FURNITURE

General

1. Furniture provided for furnishing officers' accommodation in the past and that provided in future, will constitute officers' Furniture Scale of such furniture are given in B&H (Furniture) Schedules, section 'A'. The more fact that scales have been laid down in B&H (Furniture) Schedules does not automatically entitle officers and messes to be provided with furniture, unless they are entitled free issue. The policy, however, is that subject to availability of funds furniture should be provided in all new officers accommodation.

Entitlement to Furniture

2. All categories of officers belonging to Army/Navy & Airforce are entitled to a free issue of furniture.

3. a. The under mentioned officers although having no entitlement, may be issued the furniture on hire, subject to certain condition (see para 5).

(1) Civilian officers of MES.

(2) Civilian Gazetted officers of the Audit Accounts Department, when visiting out of the way stations on tour.

(3) Other civilian officers to whom the renting of furniture has been or may be authorized from time to time by the Government of Bangladesh.

b. No furniture may be hired out to any unit, individual, institution etc except as provided above, without the sanction of the Government of Bangladesh.

4. Furniture is authorised by B & H (Furniture) Schedule for certain specified officers' quarters and Messes. Furniture has also been provided for certain quarters and Messes other than those for which these are special scales in B & H (Furniture) Schedule. Such quarters and messes are to be treated as permanently furnished and furniture provided will not be removed elsewhere or exchanged, except when necessary for repair or

renewals or if the relevant scales in B & H (Furniture) Schedules are altered.

5. Furniture may be issued on hire only on the under mentioned conditions:

- a. That it is surplus to the authorised scale of the station or is of obsolete pattern.
- b. That it is liable to withdraw notice if required for issue to authorised persons in the same station or for transfer to another station.
- c. That the articles, hired to any individual, make up a reasonably complete set of furniture as provided in the relevant B&H (Furniture) Schedule.

6. No allowances may be made in the authorised scale of the station for officers' Quarters or Messes except for officers, who are entitled to furniture free of rent i. e. those falling under para 2 or for permanently furnished Quarters and Messes. Furniture will not be purchased or hired, in order that it may be issued on hire to officer nor will furniture be transferred from one station to another for the same purpose, without the prior sanction of DW & CE concerned. No new article of furniture may be purchased or hired under para 2 (b) in a CMES area, so long as a single article of the same or similar kind remains hired out to a non-entitled officer.

Recovery of Rent

7. Whenever furniture is issued on hire, the SDO will prepare a statement of furniture issued, in the form given in Annex 'A' and will forward it to the GE's Unit Accountant, who will take the action necessary for the recovery of the rent. The SDO will notify to the GEs Unit Accountant any charges in the articles issued and will also notify him, when the furniture is withdrawn from the officer. It is not necessary to notify the GEs Unit Accountant of the occupation of a permanently furnished quarter by an officer, who is liable to pay rent, since this fact will be shown by the occupation Return submitted by the unit, etc to whom the officer belongs.

8. The rent to be charged for furniture will be assessed at the rate of ten percent per annum of the furniture (see para 11 of RI No 347).

FURNITURE ISSUED TO OFFICER**Accounting and Inspection**

9. Furniture issued to an officer, whether on hire or otherwise and whether or not his quarter is permanently furnished, is a personal issue to the officer and is no concern of the unit to which he belongs, except in so far as discipline is concerned. Although a group of quarters may be taken together for the purpose of working out the authorised scale of the station, a separate Unit Distributions Ledger (see para 15 of RI No 351) will be prepared for each quarter. This provision applies to quarters at Schools of Instruction equally with other quarters. Furniture will be issued personally to each officer. When quarters are vacant, the furniture in them will be in the charge of MES.

10. Furniture issued to an officer will be handed over to and taken over from him in person, It will periodically be inspected and verified annually in the same way as furniture on charge of a unit, barrack damages will be charged in the case of unfair wear and tear or deficiencies. For all these purposes the officer will be treated as a unit. He may appoint a representative to be present at periodical inspections, but will be present in person, when furniture is handed to or taken over by him and he will be required to sign the Unit Distribution Ledger and all vouchers in connection will issued, receipts and damages. If an officer fails to be present on required occasions or delays unreasonably, the signing of document or the acceptance of barrack damages, the SDO will report the facts to the Garrison Engineer who will, if necessary, report in turn to the OC Station.

Maintenance and Renewal

11. Furniture in permanently furnished quarter and furniture issued to officers entitled to it rent free, will be repaired and renewed according to the same rules as other B & H furniture. Expenditure on transporting it to and from the F & S yard for repair or exchange of when issued or withdrawn will be charged to maintenance funds. Furniture issued on hire will be repaired free of charge by the MES and if beyond repair, may be replaced if a suitable article is available and is surplus to the authorised scale of the station, No expenditure will, however, be incurred in renewing

RESTRICTED

any article when beyond repair. The officer hiring the furniture will be responsible for transporting it to and from the F&S yard for repair or exchange or when issued or withdrawn, transport will not be provided by the MES nor may any expenditure on this account be charged to MES funds.

12. For a manufacturing special items of furniture required for the residences of Senior officers, who are entitled to a permanent allocation of accommodation, specifications and designs may be approved by the officers concerned.

This supersedes Routine Instructions No 3008 of 1990.

STATEMENT OF FURNITURE ISSUED ON HIRE

Personal No Rank Account No

Accounting Officer

Name.....

Unit or Appointment.....

Accommodation occupied

Date issued Issue Vr. No and date

Ser	Article	Rate each		Qty	Value	
		Tk.	Ps		Tk.	Ps

Total value of furniture issued Tk.
 Rent per annum at 10% Tk.
 Rate per mensem; Tk.

No dated200

From SDO To Unit Accountant

Furniture has been issued on hire as shown above. Will you please recover rent, in accordance with the details given, until further notice.

Please acknowledge Signature
 Appointment.....

ROUTINE INSTRUCTION NO 355/2008
FURNITURE FOR MES OFFICES AND INSTALLATIONS,
FURNITURE AND EQUIPMENT FOR MES INSPECTION
BUNGALOWS

1 All furniture required for MES offices and installations including such articles as correspondence trays, filing cabinets, printing frames, etc but no type writers, duplicators and the like camp furniture and furniture cooking utensils, cutlery, crockery, carpet, durries, matting and curtains required for MES inspection bungalows are regarded as tools and plant and funds for their provision and maintenance are allotted under respective heads of Accounts of the three services. Para 169 of MES Regulations and Annx 'B' of RI 347 refers, MES (Army/Navy/Air) are responsible for the provision of furniture/equipment required for MES offices and inspection Bungalows.

2. T & P are divided into a number of classes (See MES Regs, para, 169) of which office and inspection bungalow furniture etc is one. This RI is applicable to this category of T & P. In the remainder of this instruction office and inspection bungalow furniture, etc will for brevity be referred to as " Office T & P ".

3. Scales: There are no fixed scales. Office T & P is provided according to the requirements in each case having regard to economy and efficiency. Furniture for offices will except for special items of equipment, be based generally on the scales for offices in B & H (Furniture) Schedules.

4. Designs and specification : Furniture for offices, except for special items and for inspection bungalows will be manufactured according to the standard plans of B & H furniture issued by the E in C.

5. Valuation: Articles of office T & P will be valued for all purposes as in para 11 of RI 347.

6. As in the case of B & H furniture new office T & P is provided as either new supplies or renewals.

New Supplies

7. New Supplies cover the provision of office T & P additional to that already held on charge. Provision is made according to actual needs. CMES and GEs will demand funds in the Annual Budget Estimate Forecast as a lumpsum. List of articles with cost will be attached.

8. Provision for office T & P will be made in the estimate for construction of or increasing the accommodation in an office or inspection bungalows. Funds for any T & P which cannot be provided from existing stocks or by transfer from other stations will be demanded as in para 7. Office furniture required in execution of a large project will, however, be provided from the project if it cannot be found from existing stocks.

Renewals

9. The provision of para 3 & 8 of RI No 348 apply to office T & P except that funds will be demanded in the Annual Budget Estimate forecast at the rate of 2½% of the value of office T & P as shown in the Annual T & P Return (BAFW-2193) (See para 15 and 21).

Estimate for New Office T & P

10. Estimate will be submitted by the CMES on BAFW-2222 in all cases before obtaining an order for new office T & P as in para 9 of RI No 348. The powers of sanctioning estimates for new office T&P are very limited: see item (6) of Table 'B' be revised MES Regulations.

Transfer of Office T & P

11. The power to transfer office T & P are the same as those to transfer furniture (see para 10 of RI No 348) and transfer will be resorted to in order to save expenditure surplus B & H furniture may be used to make up deficiencies of office T & P but such transfers will not be made without financial transaction.

Manufacture and Purchase

12. The instructions contained in para 14 to 20 of RI 348 apply to the manufacture of all furniture other than such articles as cannot be manufactured by the ordinary contractor. Articles, such as steel almirahs and filling cabinets, carpet, durries, curtains, cooking equipment, cutlery, crockery, table linen etc will be purchased according to the rules in force for making direct purchases. Quotations will be obtained before making purchases.

Accounting and Marking

13. All articles manufactured or purchased will be taken on charge by the SDO in the station T & P Register (BAFW - 2279) (See para 19) by means of a Transfer Receipt Voucher as in the case of Furniture. He will also amend the station T & P Distribution ledger (BAFW-1814) (See para 19).

14. All articles will be branded or marked as in para 23 of RI 348.

Maintenance of Office T & P

15. Funds for the repair and upkeep of Office T & P will be demanded in the Annual Budget Estimate forecast at the rate of 7½% of the value as shown in the annual T & P. Return (BAFW-2193) (See para 21). Funds demanded for renewal and maintenance will not exceed the total of 10% (See para 9 also).

16. The instruction in paras 2 to 12 of RI 349 will be followed in the repair of office T&P. Special articles which cannot be repaired by DEL may be repaired let out on quotations to firms capable of carrying out the work. The same labour may be employed as that employed in repairing B&H Furniture charges to respective Heads of A/C being allocated at the end of the month. Articles requiring repair will be entered in the same furniture Repair Register as B&H. Furniture. It will not be necessary to enter office T & P in the Register of Furniture deposited since it will be kept in the godown until repairs can be undertaken.

Disposal of Surplus and Unserviceable Office T & P

17. The instruction RI No 356 will be followed Unserviceable articles will be entered in the Register of unserviceable furniture. A separate register is not required but unserviceable B&H. Furniture and office T & P will not be included in the same Transfer Expense Voucher.

Records and Returns

18. The purpose and responsibility for the maintenance of records and returns are the same as for B & H furniture (See RI. No 351).

Records

19. The records which are to be maintained separately for office T & P are as under:

a. Station T & P Register (BAFW-2279). All classes of T & P are recorded in this Register, but it is convenient that a separate register should be kept for office T & P. It will be maintained as in paras 12 and 13 of RI. 351.

b. T&P Distribution Ledgers (BAFW-1814). A station Distribution ledger and separate Distribution ledger for each office, installation and inspection bangalow will be maintained. The instruction in para 14 of RI No 351 will be followed. Distribution ledgers are used for all classes of T&P but separate ledgers should be used for office T&P.

20. As stated above records, of office T & P repaired and unserviceable office T & P, will be maintained, but entries on these accounts will be made in the furniture repair Register (See para 22 to 24 of RI. 351) and the register of Unserviceable Furniture (See para 26 to 28 of RI. 351).

Returns

21. The only return required is the Annual T & P Return (BAFW-2193). This return will be submitted by GEs to the CMES by Ist Aug annually with the Annual Budget Estimate forecast. A separate return is submitted in respect of each class of T & P. The purpose of this return is to show the value of T & P held in each Division and hence is the basis for preparing the demand for funds for renewals and maintenance. No special instructions for preparing the return are necessary.

Periodical Inspection and Stock Taking

22. Periodical inspection and stock taking will be carried out exactly as prescribed for B & H. Furniture in RI. No 353. These duties will not be over looked Surpluses and deficiencies will be regularised in the manner explained in paras 18 to 20 of RI. 353.

Barrack Damages

23. Barrack damages will be charged as for damages or deficiencies of B & H. Furniture. It is for the head of the office to accept and pay charges for barrack damages, it is not the duty of the SDO to fix the responsibility on an individual and recover the cost from him, except in the case of office T & P in building in his charge.

Transfer of Charge

24. T & P records and the annual T & P Returns will be compared and checked in the same manner as described in RI. No 358 for the corresponding records and returns of B & H Furniture.

This supersedes Routine Instructions No 3011 of 1990.

CHAPTER-VIII

ROUTINE INSTRUCTION NO 356/2008
DISPOSAL OF SURPLUS, OBSOLETE AND
UNSERVICEABLE FURNITURE

Surplus and Obsolete Furniture

1. CsMES will report to the DW & CE concerned annually all furniture of current and obsolescent patterns which is not required or can not be utilised to complete authorised scales within their own areas. CsMES will make use of surplus furniture to the fullest possible extent to make up deficiencies of other patterns where the surplus patterns are a reasonable sufficient substitute for those which are deficient. DW&CE concerned will see if the surplus furniture in one area can be transferred to other CMES to make up his deficiencies. If the furniture still remains surplus it will be reported to the Engineer-in-Chief, who will ascertain the requirements of the other armed services and will order transfer on book debit, if required by them. The Engineer in Chief will accord permission for the disposal of the remaining furniture to be auctioned by the stock holder through auctioneer appointed for this purpose.

2. Action to dispose of furniture of obsolete pattern will be taken by GEs without awaiting the orders of superior authorities, unless orders have been given by them to the contrary in the case of any particular article.

Method of Disposal

3. Surplus furniture and furniture of obsolete patterns will be disposed off in the same manner as surplus stores, that is to say through auctioneer appointed by DW&CE. GEs will submit a draft E3 Form D through the usual MES channels to the E in C. In preparing this form the value of the furniture will be the book value and not its value assessed on its actual condition. The condition of the furniture will be precisely stated, avoiding such meaning less description as “repairable” “require slight repair”, etc will be used. Once the draft E3 Form D has been submitted, the furniture included on it may not be utilized for any purpose without obtaining the prior sanction of the E in C.

4. Surplus furniture which requires such extensive repairs that it is, therefore, unserviceable will be treated as such and will be disposed off as described in the paragraphs following and not as in para 3.

Unserviceable Furniture

5. It is important that pilferage of unserviceable furniture be prevented and to achieve this the following measures will be taken. A Register of unserviceable furniture (BAFW-2412) will be kept at each station (see para 26 of RI No 351). The furniture will be kept apart from furniture being repaired and un-issued godown balances, if possible, in a locked shed. Unserviceable furniture for which write off sanction has been applied for, will be stacked separately from that for which sanction has not yet been applied for. As soon as the "Write off" of any furniture has been sanctioned, steps for its disposal, as ordered by the sanctioning authority, must be taken without any unavoidable delay. Inspecting officers will pay particular attention to this point.

Writing off

6. The procedure for disposing of unserviceable furniture is as follows. The SDO will enter all the articles on a Transfer Expense Voucher (BAFW-2253) which he will prepare in quadruplicate and will forward three copies to the Garrison Engineer. One or two extra copies will be made, if the value of furniture considered beyond economical repair is more than can be sanctioned by the Garrison Engineer or CMES respectively. The articles will be valued as in para 11 of RI No 347 and the prices will be checked by the Unit Accountant before forwarding it to the GE.

7. While a multiplicity of "Write-off" is undesirable it is equally undesirable that large quantities of unserviceable furniture should be permitted to accumulate. Since the normal method of disposal is by public auction, unserviceable furniture should be written off as soon as the quantity accumulated, taking into consideration other stores in the station requiring disposal by public auction at the same time, is sufficient for an auction to be held. On the other hand, disposal should not be postponed for a long period. When therefore, considerable quantities of furniture are being found to be in a condition beyond economical repair, they should be written off monthly, if the quantities are small, in every two months or quarterly.

8. The Garrison Engineer will at the earliest opportunity inspect the furniture and will enter his order on all three copies of the Transfer Expense Voucher. If the total value of the furniture, which he considers should be written off, exceeds his financial powers under item (7) of Table B, MES Regulations, he will write his recommendations, not his orders, on the Transfer Expense Voucher and will forward all copies to the CMES for sanction. The Garrison Engineer may depute an AE, F&S (not being in charge of the Sub-Division concerned) or an AGE to inspect the unserviceable furniture, but may not delegate his powers to the inspecting officer, who will write his recommendations on the Transfer Expense Voucher, which recommendation must be confirmed or may be set a-side by the Garrison Engineer. CsMES, before passing orders on Transfer Expense Voucher submitted to them, may appoint a Board of Survey to report on the furniture and to give their recommendations, but this course is not necessary if the CMES is satisfied with the recommendations of the Garrison Engineer or if he decides to inspect the furniture himself.

9. After giving his orders on the Transfer Expense Voucher, or when it has been received with the orders of higher authority, the GE will pass one copy to the Unit Accountant and will forward one copy to the SDO who will take action as under.

- a. The SDO F&S will show as “issues” in the station Furniture Register (BAFW-2279) see para 12 of RI No 351, all articles which have been sanctioned to be written off, giving the number and date of the Transfer Expense Voucher as the authority for the entries and he will also give the relevant page number of the station Furniture Register in the “remarks” column of the Transfer Expense Voucher against each article. He will also make the appropriate entries in the Register of Unserviceable furniture

Method of Disposal

10. The normal method of disposing of furniture will be by public auction, except that:

- a. Metal parts which are in short supply and which are required for the repair of other furniture, such as parts of charpoys, iron pipe, may be removed and taken on charge in the Store-in-hand Ledger provided they are serviceable.

b. If it is desired to dispose of furniture by any method other than the above or to utilise timber from unserviceable furniture for repairs the prior approval of the DW&CE will be applied for, this approval will not be anticipated.

11. Sale by public auction will be conducted by the appointed Government Auctioneer under the supervision of the Garrison Engineer or an officer appointed by him. A representative of Station, HQ will also be present at the time of auction. The SDO will prepare four copies of the sale Account (BAFA-58). After the auction, all the copies of the sale Account will be signed by the Supervising officer and three copies will be sent by the SDO to the Unit Accountant. The MES brand (See para 24 of RI No 348) on all articles sold by auction will be defaced by branding with a broad arrow reversed, before they are taken away by the purchasers.

12. If the DW&CE sanctions the use of timber from unserviceable furniture for repairs, the timber which it is intended to use will be removed and the remainder will be broken up in the presence of the Garrison Engineer (Who may not delegate his duty) or of the ACMES, F&S, if the CMES so directs. The timber which is to be utilised will be measured and entered as such in the stores-in-hand ledger, and the remainder will be weighed and entered in the store-in-hand ledger as scrap wood. The GE or ACMES, F&S will certify the entries in the stores-in-hand ledger and he will also enter the quantities of timber and scrap-wood on the Transfer Expense Voucher. The scrap wood will be put to auction along with the other furniture.

13. After the furniture has been disposed off, the Supervisor F&S will endorse on all copies of the Transfer Expense Vouchers, particulars from which the action taken can be linked with the orders of the sanctioning officers i.e. Sale Account No Measurement Book page and No and page of stores-in-hand ledger.

This supersedes Routine Instructions No 3004 of 1990.

ROUTINE INSTRUCTION NO 357/2008
BARRACK DAMAGES

1. Losses or damages, which cannot be attributed to fair wear and tear to furniture held on charge by a unit, will be treated as Barrack Damages. The cost will be assessed by the SDO F/S and will be paid by the unit. Barrack Damages will not be assessed in respect of the stringing of charpoys, except when handed into the MES as surplus to requirements. If the whole cost of barrack damages noted when a unit is leaving the station is less than Rs. 50/- the unit etc will not required to pay. (see para 11 also)
2. The cost of barrack damages will be assessed as under:
 - a. When the damage can be repaired, the assessed cost of the repairs.
 - b. When an article is deficient or is damaged beyond repair the full price (see para 11 of RI No 347) of the article whatever its age and condition when issued.

No Departmental Charges will be Levied

3. Except in the case of furniture issued personally to individuals, the payment of the cost of barrack damages is the responsibility of the unit and cannot be repudiated on the grounds that the responsibilities for the loss or damage, cannot be fixed on any particular individual or individuals. In case, however, of a dispute concerning the assessment of damages, which cannot be settled, directly between the unit and the MES the unit has the right of appeal, to the station Commander. Pending orders on an appeal, the unit will pay the assessed cost, as soon as the articles are repaired or replaced; when a unit, etc is leaving the station, it will pay the assessed cost to the OC, station before leaving. Amounts paid in respect of articles found deficient or beyond repair, will be credited to MES. Revenue head of the services concerned of surplus to the authorised scale of the station, and new articles will not be purchased or manufactured to replace them. If not surplus, new articles will be purchased, manufactured as renewals and the amount paid by the unit will be credited accordingly. Amounts paid in respect of repairable articles will be credited to the detailed head of account, to which the cost of repairs is charged.

4. No loss statement is necessary in respect of articles deficient or damaged beyond repair except when, on appeal, the Station Commander orders that the cost of deficient articles will not be borne by the unit. In such cases the procedure in para 20 (c) of RI No 353 will be followed.

Procedure for Recovery of Barrack Damages

5. The recovery of the cost of Barrack damages is effected by means of a "Barrack Damage Voucher" which is a Transfer Voucher (BAFW-2253) enfaced "Barrack Damages" separate vouchers will be prepared for repairable articles and for articles found deficient and/or damaged beyond repair (but see para 9). The circumstances in which the articles were found damaged, Damaged beyond repair or deficient, will be written on the vouchers, and the cost assessed according to para 2 will be entered against each articles. The heads of account to which the amount is to be credited will also be shown. Barrack Damage Vouchers for articles found deficient or damaged beyond repair constitute the authority for writing off the articles and disposing of those beyond repair, and therefore require the orders and signature of Garrison Engineer (or the CMES in the event of the value being beyond the powers of the GE at item (7) of Table B of MES Regulations). Barrack Damages vouchers for repairable articles do not require the orders and signature of the GE.

Furniture Returned for Exchange and Repairs

6. Barrack Damage Vouchers for Repairable articles: The SDO will prepare five copies of the vouchers giving a reference to the unit's Repair and Exchange voucher (see para 16 of RI No 352) and will forward four copies to the Garrison Engineer. The GE will in return forward all four copies with a Treasury Receivable Order to the unit with a request that three copies be signed in acceptance of the damages and returned with the Treasury Receipt. Having received them, the GE will pass one copy of the voucher with the Treasury Receipt to the unit Accountant, one copy to the SDO and will retain the third copy.

Barrack Damage Vouchers for Articles Deficient or Beyond Repair

7. The SDO will prepare the same number of copies of the vouchers and they will be dealt with in the same manner as in para 6, but before disposing of the vouchers received back from the unit, the Garrison Engineer will, after inspection of the articles if he thinks fit, write his

orders on all three copies of the vouchers, sanctioning the write off of the articles and directing how the articles, which are beyond Repair, will be disposed of. On receiving his copy the SDO will record the articles as issues in the Station Furniture Register and will make the appropriate entries in the Register of Unserviceable Furniture in respect of those articles, which are beyond repair (see para 5 of RI No 356) Action will then be taken as described in para 6 to 9 of RI No 356 to effect the disposal of the articles which are beyond repair.

Damages Noted at Periodical Inspections

8. Barrack Damage Voucher will be prepared immediately on completion of the inspection of the furniture held on charge, the SDO will obtain the signature of the representative of the unit on all copies of the vouchers and will leave one copy with the representative. Action will then follow as described in para 6 and 7, except that the SDO will forward only three copies of the vouchers to the Garrison Engineer, and the GE will request the unit to return all three copies with the Treasury Receipt. If any of the damages are disputed by the unit and agreement cannot be reached, no copy of the vouchers will be left. The SDO will forward all copies to the GE with a statement of what items are not accepted by the unit.

Damages Noted when the Unit is Leaving the Station

9. Immediately on completing the inspection of furniture, the SDO will prepare three copies of a Temporary Barrack Damage Voucher on which all the assessed damages will be recorded, Whether or not there are articles beyond repair or deficient as well as repairable articles. He will obtain the signature of the representative of the unit, and will leave one copy with him requesting that the damages be deposited in cash with OC, Station. If there is a dispute which cannot be settled and whether or not the representative signs with reservations or refuses to sign, he will be informed that the assessed amount must be deposited with the OC's Station pending the passing of orders on the dispute. The SDO will forward one copy of the voucher to the OC Station to enable him to ensure that the assessed amount is paid to him before the departure of the unit. He will retain the third copy, from which he will prepare the Barrack Damage Voucher properly.

10. The SDO will then prepare the Barrack Damages Voucher as in para 6 & 7 with the same number of copies and will link the temporary and proper vouchers by recording their numbers and dates prominently on each other. When forwarding the vouchers to the GE he will inform him what items, if any are disputed. The procedures described in paras 6 & 7 will be followed exactly, except that the GE will forward the vouchers and treasury receivable order not to the unit but to the OCs Station, who will pay the amount into the Treasury. If a dispute is decided in its favour, the OC Station will refund to the unit the sum deposited in excess of the final assessment.

11. If the total of the assessed damages is less than Tk. 50/- no charge will be made to the unit and repairs will be treated as due to fair wear and tear. In the unlikely event of such an assessment including the cost of an article found deficient, a loss statement will be prepared and action will be taken as in para 20 (c) of RI 353.

Disputes and Appeals

12. The action to be taken by the SDO in case of disputes, which he cannot resolve, has been referred to in para 8 to 9, and the right of appeal by the unit has been referred to in para 3. The unit may also dispute damages assessed when furniture is exchanged. The Garrison Engineer will immediately enquire into all disputed items reported to him and will inform the unit and in the case of units, which are leaving or have left the station, the OC station of his decision. If he decides any items in favour of the unit, he will return the Barrack Damage Vouchers to the SDO for amendment.

This supersedes Routine Instructions No 3009 of 1990.

ROUTINE INSTRUCTION NO 358/2008
TRANSFER OF CHARGES

1. It is not the intention in this instruction to give detailed instructions regarding the transfer of charge of all aspects of a F&S Sub Division. In the paragraphs following are given the steps that will be taken and the points that will be examined at every station in the Sub Division by the relieving SDO, in order that he may satisfy himself that the orders and instructions regarding furniture are being carried out, that records are complete and correct and that furniture is being properly and economically maintained. These paragraphs are also applicable in the case of an SDO taking over charge of an outstation Sub Division which includes furniture duties.

2. He will examine the under mentioned publications with the objects stated:

- a. B & H (Furniture) Schedules; that they are complete and amended to date.
- b. Furniture plans :That they are complete and up-to-date, as shown by list of Articles, and that all plans which have been superseded have been removed.
- c. List of Articles: That it is amended to-date.

3. He will examine the under mentioned records, report and return and will satisfy himself on the points stated under each.

- a. **Register of Furniture Authorised for each lines, etc**
 - (1) That scales have been worked out for all lines, hospitals, installations, offices, permanently furnished quarters, etc, for which furniture is authorised.
 - (2) That no scales have been worked out for any units or individuals, not authorised by B&H (Furniture) Schedules and for which no special authority has been given.
 - (3) That the scales have been correctly worked out according to B & H (Furniture) Schedule or the special authority.
 - (4) That the various articles have been correctly totalled.

b. **Register of Authorised Furniture**

- (1) That the quantities of the various articles have been correctly entered from the Register of Furniture Authorised for Each Lines, etc, and have been correctly totalled.
- (2). That the station reserve in the correct proportion has been added to those items, for which it is authorised by Annx 'A' of B & H (Furniture) Schedule, RI 347.

c. **Unit Distribution Ledgers**

- (1) That the last annual verification has been duly carried out.
- (2) That the last comparison of unit and MES Ledger has been duly made that the MES Ledger has been signed by both parties.
- (3) That, by comparison with Receipt and Issue vouchers, all receipts and issues have been correctly entered.
- (4) That, by comparison with Register of Furniture Authorised for Each Lines, etc, no issues have been made above the authorised scales without written sanction of the competent authority.

d. **Station (Division) Distribution Ledger**

- (1) That the quantities shown against each lines, agree with the balances of the unit distribution ledgers.
- (2) That unit distribution ledger exists for all units and individuals, to whom furniture has been issued.
- (3) That, by comparison with the Station Furniture Register, all articles are shown on the station Distribution Ledger and that the totals agree.

e. **Station Furniture Register**

- (1) That the articles are correctly described according to list of articles.
- (2) That the rate for each article is correctly given.
- (3) That entires are up-to-date and that references to vouchers are given.

(4) That no obsolete articles are held or that, if any are held, steps have been taken to dispose off them.

f. **Register of Unserviceable Furniture**

(1) That, by comparison with Transfer Expense vouchers all articles put up to write-off have been entered.

(2) That entries are being made at every stage of write-off and disposal.

(3) That no undue delays are occurring in receiving back T. E. Vouchers submitted for sanction.

(4) That no undue delays are occurring in disposing of furniture after write-off has been sanctioned.

g. **Furniture Repair Register**

(1) That, by comparison with units' Repair and Exchange Vouchers, all articles received for repair are being entered in the register.

(2) That the quantity of furniture received for repair is not unduly high.

(3) That there is no undue accumulation of furniture awaiting repair.

h. **Register of Furniture Deposited** That there is no undue delay in repairing and returning furniture deposited by units for repair.

j. **Annual Furniture Return**

(1) That authorised scales are correctly given and that no allowance has been made for furniture issued on loan or hire.

(2) That quantities held on charge are correct as shown by the station furniture ledger.

(3) That the rates are correctly given.

(4) Whether there are any considerable surpluses and deficiencies and whether steps are being taken to correct them.

k. **Last Stock-taking Report**

- (1) That stock taking was carried out at the due time.
- (2) That the stock taking was complete.
- (3) That surpluses and deficiencies have been adjusted or that steps have been taken to adjust them.

4. He will inspect the F & S Yard and any other places where furniture is stored. He will carry out a stock taking which will be done as directed in paras 14 & 15 of RI No 353. He will also satisfy himself on the undermentioned points in addition to those mentioned in para 17 (c) of RI No 353.

- a. That only articles which are surplus to the authorised scales of the station are being kept in store, except as a temporary measure for which there is some good reason.
- b. That unserviceable articles have been put up for write off and are segregated from serviceable furniture.
- c. That labour employed on repairing furniture is being fully & economically employed & that the workmanship is good.
- d. That a sealed specimen charpoy (see para 6 of RI No 350) and a Sealed specimen of caning (see para 12 of RI 349) are being kept.
- e. That no stringing of charpoys is being done which should be done by the troops.

5. He will inspect any new furniture which is being manufactured by contract and the work is being done by the caning contractor; he will satisfy himself that the work is being done to specifications and that furniture is being manufactured according to the most recent plans. He will also inspect measurement book to ensure that all contract, work is being entered and that the books are being properly kept.

6. He will visit all units in the station with the main object of meeting the Quartermaster or other officer responsible for furniture and to ascertain the quality and state of repair of the furniture in the Station. It is not necessary to verify and agree the balances in all Unit Distribution Ledger but this should be done in some cases in order to ascertain whether they are being correctly mentioned by units.

This supersedes Routine Instructions No 3010 of 1990.

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**MILITARY ENGINEER SERVICES
BANGLADESH ARMED FORCES**



PROVISIONAL
COMPENDIUM
OF
MES ROUTINE INSTRUCTIONS-2008

PART – IV
TOOLS, PLANT & MACHINERY

PUBLISHED BY: AHQ, E IN C'S BR, WKS DTE, DHAKA CANTT.

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COMPENDIUM OF MES RI - 2008
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PART-IV
TOOLS, PLANTS AND MACHINERY

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CHAPTER-1**ROUTINE INSTRUCTION NO 401/2008**
SIZES OF CRAWLER TRACTORS

1. Crawler tractors and their equivalent models of other markers will be called by sizes as shown against them:

Ser	Name of Plants	Make	Model	Country of Origin	Size	Engine HP
(a)	(b)	(c)	(d)	(e)	(f)	(g)
1.	Tracked Dozer Size-I (Heavy)	New Holland	D350	Italy	I	345
		Catterpillar	D8R	Brazil	I	305
		Komatsu	D155A-6	Japan	I	354
2.	Tracked Dozer Size-II (Under 200 HP)	Catterpillar	D6R Series-III	Japan	II	185
		Komatsu	D65EX-15	Japan	II	190
		Dressta	TD15M	Polland	II	190
		CASE	1850 KLT	Italy	II	190
	Tracked Dozer Size-II (Over 200 HP)	Dressta	TD 20H	polland	II	225
		Catterpillar	D7R Series-III	Japan	II	240
		Komatsu	D85EX-15	Japan	II	240
3.	Tracked Dozer Size-IV	Komatsu	D37EX-21	Japan	IV	85
		Catterpillar	D4K	Japan	IV	92
		CASE	850K	USA	IV	96
		HSW StalowaWola	TD-9H Extra	Polland	IV	90
4.	Excavator (Track Type)	Daewoo/Solar	290LC-V	South Korea	-	194
		Kobelco	SK 230LC Mark-VI	Japan	-	168
		Komatsu	PC 220 LC-7	Japan	-	168
		KATO	HD 1023 II	Japan	-	167.5
		Komatsu	PC 300 SE-7	Japan	-	242
		Volvo	EC 240 BLC	Korea	-	168
		Catterpillar	324D	Japan	-	166

2. **References.** The authorities of above plants are shown in below:
- a. Tracked Dozer Size-I - Engineer Director letter no 2493/05/Q/BullDozer Heavy Date 05-06-2008.
 - b. Tracked Dozer Size-II - Engineer Director letter no 2493/02/PT-10/QDate 07-12-2006.
 - c. Tracked Dozer Size-IV - Engineer Director letter no 2493/02/PT-10/QDate 23-10-2007.
 - d. Excavator (Track Type) - Engineer Director letter no 2493/05/Excavator/Q Date 04-12-2006.

This supersedes Routine Instruction No 401 of 1990.

ROUTINE INSTRUCTION NO 402/2008
HIRE CHARGES FOR TOOLS AND PLANTS

1. The rate for hire are laid down in Annex 'B' and 'C' of all the cases where plant is hired out to Military units, Government Departments, Local Bodies, Public utility company/companies, private companies and individuals and between MES Formation.
2. The rules for hiring plant will be as follows:
 - a. Permission to hire out plant other than to a Military unit, MES or to a MES contractor for use on Defence works must first be obtained from the Engineer-in-Chief branch (Works Dte). In these cases it is not the general policy to hire out plant unless the work, for which plant is required, fulfils a Military as well as civil need.
 - b. Hire charges will be levied for a day of minimum eight hours and a week of six working days. The eight hours day will comprise of working and non-working hours i.e. if a machine works for 5 hours only in a day, hire charges will be levied for five hours at working hour rate, three hours at non-working hour rate. One day per week will be allowed for maintenance and will be utilised for this purpose and will be charged at non-working rates, parts of an hour being counted as a whole hour.
 - c. Details of working time will be maintained by the operator of the plant in a driver's dairy, and hire charges will be based on checked against these details. Details entered by operator will be initiated by the hirer or his representative.
 - d. In the cases of MES works, employing MES approved contractors the SDO B/R will submit to the SDO E/M every month an extract from the machine/machines Log books to enable them to raise monthly hire charges against the contractors under intimation to the UA concerned with one copy to the GE/AGE and the other to the contractor. The recoveries will be affected as each RAR/Final bill is paid.
 - e. 1st time repairs in case of T & P issued on hire to MES formations will be carried out locally by the hirer and necessary debit on this account will be shown in the debit voucher.

- f. Should hired plant become unserviceable, the casualty will be reported to the owners, who will if considered necessary arrange to inspect the plant at site for possible repairs. If the plant is considered beyond repairs at site, it will be despatched to MES yard at hirer's risk. Hire charges will be levied up to the date of the letter reporting casualty (confirmed by driver's diary).
 - g. Safe custody of the plant will be the responsibility of the hirer until such times, as he receives a receipt for the plant from the engineer-in-Charge.
 - h. Accommodation of plant operators will be the responsibility of the Hirer. The MES will be responsible for disbursement of their pay etc.
3. Should it be necessary to hire any item of plant, which is not specially mentioned in Annexure 'A' hire charge should be assessed on the following formula based on capital cost, estimated total working life in hours and average working hours per year.
- a. 6 percent interest per annum capital cost distributed over the estimated working hours per annum.
 - b. Depreciation on the assumption that the plant will be totally worn out and worth nothing at the end of its total working life in hours.
 - c. Maintenance and repair charges on the assumption that during the plants working life a sum equal to 100% percent of its capital cost will be spent.
 - d. Working cost of POL and crew.
 - e. 10% percent "on cost" on the working cost.
4. The total of the above will be reduced to a figure per hour which will be the rate per working hour and 10% percent of the figure will be taken as the non-working hour rate.
5. The MES will always supply the POL except when the HIRER is another MES formations, when the Hirer Formation may provide the POL if more convenient. If this were done, the cost of POL provided will be reduced from Hire charges debited to the hirer.

6. The terms "OWNER" and "HIRER" used in the preceding paragraphs are defined as follows:-

OWNER: is the MES formation hiring out the plant.

HIRER : is the party to whom the plant is let on hire.

This supersedes Routine Instruction No 402 of 1990.

HIRE AGREEMENT

An AGREEMENT made theday of.....200 between the President of the People's Republic of Bangladesh (here-in-after called "the owner" which expression shall where the context admits include his successor in office) of the one part and M/S.....(here-in-after called "the Hirer") of the other part.

Whereby it is Agreed as Follows

1. The owner shall let to the hirer and shall take on hire from the owner from the..... day of.....until the hiring shall be determined as here-in-after provided the machinery/T&P specified in the First Schedule here to Appendix -1 (here-in-after referred to as the plant).
2. The hirer shall during the continuance of the hiring under this agreement pay to the owner by way of rent for the hire of the plant (Here in after called the hire charges) calculated at the rates specified in the Second Schedule (Appendix -1 hereto).
3. Hire charges will be levied for a day of minimum eight hours and a week of six days. The eight hour day will comprise of working and non-working hour i.e. if a machine works for five hours only in a day, hire charges will be levied for five hours at working hours rate and three hours at non-working hours rate. One day per week will be allowed for maintenance and will be utilized for this purpose and will be charged at non-working rates, parts of an hour being counted as a whole hour.
4. The hirer shall be liable for the over time pay of MES plant operator/operators, if the plant works for more than eight hours on any one day. The hirer shall also be liable for the daily allowance and traveling allowance etc. Admissible to the crew etc. operator/operators of the plant under the rules applicable to them. The hirer's liability for over time pay, daily allowance and traveling allowance etc. shall be in addition to his liability for hire charges.

5. The date of commencement of hire charges shall be the date on which the plant is actually delivered to the hirer at the owners, T&P yard, or the date the owner dispatches the plant by Rail, Road or Boat to the hirer at the hirer's risk and expense. Hire charge will cease to be levied from the date of receipt of written information from the hirer by the owner that the plant is no longer required.

6. The cost of transport of the plant to site, handling, installation dismantling, packing charges and transportation charges back to the owner's T&P yard or any other place named by the owner at on greater distance than the original T&P yard, will be borne by the Hirer.

7. One day in every week will be allowed for maintenance and check of plant by the plant operator and must be utilised for this purpose. Hire charges for this day will be paid for at non-working rates.

8. Hire charges will be levied for six working days in a week including maintenance day, non-working days being charged for a non-working hour rates.

9. If plant is out of order for any reason, a report to this effect will be made in writing to the owner by the hirer immediately after the defect has been detected, and an entry will be made in the plant log book by the plant operator. Here charges will be levied upto the date of despatch by the hirer of letter reporting casualty, confirmed by the plant log, book, to the owner.

Note:

If the defective plant is replaced, the cost of transportation charges etc will be borne by the hirer.

10. The hirer during the continuance of the hiring will not sell or offer for sale, assign mortgage, pledge underlet lent or otherwise deal with plant or any part or parts thereof with any interest there in or in this agreement but will keep the plant in his own possession and permit the owner's authorised representatives at all reasonable times to have access to the plant and to inspect the state and condition thereof.

11. a. The owner shall be at liberty to withdraw the plant without notice as and when required and thereupon the hiring under this agreement shall stand determined.
 - b. The hirer may determine the hiring at any time by giving notice in writing to the owner and by returning the plant to the owner at the hirer's own risk and expense and shall thereupon forthwith pay to the owner all moneys then due and payable to him under this agreement.

12. a. The plant operator will maintain a Diary in which the number of working and non-working hours of the plant will be entered and it will be initialed daily by the hirer or by his authorised agent in token of his acceptance as to its correctness. The hirer will submit to the owner every month or within one week of return of the plant by the hirer if the period of issue is less than one month, a statement of working and non-working hours per day as recorded in the diary, to enable him to raise the hire charges. The hirer charges bills when presented by the owner will be accepted and paid by, hirer within thirty days of receipt of the bill. When the plant is received back by the owner in the T & P yard, a check of working and non-working hours of plant, as entered in the plant diary, will be made against the statement, received from the hirer, and any discrepancy discovered will be billed for in addition to the previous bills.
 - b. In case of MES works, employing MES approved contractors, the SDO B/R will submit to the SDO E/M every month and extract from the machine/machines logbooks to enable them to raise monthly hire charges against the contractor under intimation to the UA concerned with one copy to the GE/AGE and the other to the contractor. The recoveries will be affected as each RAR/Final bill is paid. The hire charges may be deducted from any sum due to the hirer under any other contract and with the owner or from his security deposit. If as a result of audit or check, any less recovery is discovered, it will be recovered by the owner from the hirer, if excess recovery is discovered, the amount shall be refunded by the owner to the hirer.

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13. Petrol, fuel, oil and lubricants etc required for the operation of plant will be normally supplied by MES if budget permits otherwise hirer will supply the petrol, fuel, oil and lubricants. Quality of fuel and lubricant to be ensured before use.

14. Safe custody of the plant will be responsibility of the hirer until such time as he receives a receipt for the plant from the owner or his authorized representative in token of redelivery of the plant to the owner.

Note: Receipt obtained from the operator of a plant will not be accepted.

15. Normal maintenance and repairs will be carried out by the owner at his expenses. If the plant be damaged by any cause other than reasonable wear and tear, full cost of repairs plus a calculated amount representing the impairment of life of the plant in question, will be charged against the hirer. In the event of plant being damaged beyond repairs by any cause or lost by the hire the capital cost of the plant prevailing at the time or the market rate if that be higher plus 10% departmental charges shall be recoverable from the hirer.

16. Accommodation for the plant operator and shelter for the plant will be the responsibility of the hirer.

17. The determination of the hiring under any clause of this agreement shall not affect the right of the owner to recover from the hirer any money due to the owner at the date of such determination or to recover costs or damages under this agreement.

18. In all disputes arising out of the above conditions, the decision of DW & CE will be final and binding on the concerned.

Signature of the hirer.

Signature of Owner for and on
behalf of the President of the
people's Republic of Bangladesh

Witness.

Witness.

Date.

Date

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HIRE CHARGES OF PLANTS

Ser	Description of plant	Hire charges per working hour with Fuel, lub etc (Taka)	Hire charges per working Hour without fuel, lub electricity etc (Taka)	Hire charges per non working hour (Taka)
(a)	(b)	(c)	(d)	(e)
1.	Air Compressor up to 5 cum (Engine Driven)?	81.00	16.00	8.00
2.	Air Compressor up to 5 cum (Electric driven)	-	14.00	7.00
3.	Air Compressor over 5 cum (Engine driven)	100.00	20.00	10.00
4.	Air Compressor over 5 cum (Electric driven)	-	65.00	8.50
5.	Bull Dozer (TD-20)/ Crawler Tractor (Size-I)	370.00	74.00	37.00
6.	Bitumen Mixer 0.28 cum	43.00	-	4.00
7.	Bitumen Mixer 0.42 cum	150.00	-	15.00
8.	Crane Crawler (5 Ton) 5,000 Kg	223.00	44.00	22.00
9.	Crane Crawler (10 Ton) 10,000 Kg	300.00	60.00	30.00
10.	Crane Crawler (15 Ton) 15,000 Kg	356.00	70.00	35.00
11.	Concrete Mixture Machine 0.15/0.20 cum (Engine driven)	163.00	33.00	16.50
12.	Concrete Mixture Machine 0.15/ 0.20 cum (Electric motor driven)	-	42.00	4.00
13.	Concrete Mixture Machine 0.20/0.30 cum (Engine driven)	185.00	37.00	18.50

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Ser	Description of plant	Hire charges per working hour with Fuel, lub etc (Taka)	Hire charges per working Hour without fuel, lub electricity etc (Taka)	Hire charges per non working hour (Taka)
(a)	(b)	(c)	(d)	(e)
14.	Concrete Mixture Machine 0.20/0.30 cum (Electric motor driven)	-	45.00	5.00
15.	Concrete Mixture Machine 0.30/ 0.40 cum (Engine driven)	190.00	40.00	6.00
16.	Concrete Mixture Machine 0.30/0.40 cum (Electric motor driven)	-	47.00	5.00
17.	Concrete Mixture Machine 0.40/0.60 cum (Engine driven)	195.00	45	7.00
18.	Concrete Mixture Machine 0.40/0.60 cum (Electric motor driven)	-	50.00	6.00
19.	Dumper 1.50 cum	100.00	20.00	10.00
20.	Dumper 2.50/3.00 cum	142.00	28.00	14.00
21.	Excavator with drag line bucket 3.80/6.10 cum	410.00	82.00	41.00
22.	Excavator with drag line bucket 2.30/6.10 cum	300.00	60.00	30.00
23.	Fork lifter (8000 Kg)	350.00	70.00	35.00
24.	Generating Set up to 20 KW AC/DC (Engine Driven)	88.00	18.00	9.00
25.	Generating Set up to 25 KW AC/DC (Engine Driven)	142.00	28.00	14.00
26.	Heater Bitumen 1360 liter	10.00	-	1.00

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Ser	Description of plant	Hire charges per working hour with Fuel, lub etc (Taka)	Hire charges per working Hour without fuel, lub electricity etc (Taka)	Hire charges per non working hour (Taka)
(a)	(b)	(c)	(d)	(e)
27.	Motor Grader Mould Board (3.5-4.0 meter)	297.00	56.00	28.00
28.	Motor Grader Caterpillar (TD-120)	314.00	62.00	31.00
29.	Motor grader 120 H	792.00	160.00	80.00
30.	Prime Mover Trailer (45 Ton) 45,000 Kg	435.00	87.00	43.00
31.	Pumping Set any type capacity 9000/ 15000 liter per hour against working head up to 30 meter (Engine driven)	75.50	15.00	7.50
32.	--Do—but (Electric driven)	-	50.00	5.00
33.	Pumping set any type capacity 16000/20000 liter per hour against working head up to 90 meter (Engine Driven)	83.00	16.00	8.00
34.	--Do—but (Electric driven)	-	55.00	5.50
35.	Pumping set any type capacity 16000/20000 liter per hour against working head over 90 meter (Engine driven)	90.00	18.00	9.00
36.	Pumping set any type capacity 16000/20000 liter per hour against working head over 90 meter (Electric driven)	-	60.00	6.50
37.	Road Roller 4,000 Kg	262.00	52.00	26.00

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Ser	Description of plant	Hire charges per working hour with Fuel, lub etc (Taka)	Hire charges per working Hour without fuel, lub electricity etc (Taka)	Hire charges per non working hour (Taka)
(a)	(b)	(c)	(d)	(e)
38.	Road Roller 6,000 Kg	265.00	54.00	27.00
39.	Road Roller 8,000 Kg	315.00	63.00	31.50
40.	Road Roller 10,000/12,000 Kg	375.00	75.00	37.50
41.	Roller Sheep Foot	10.00	-	1.00
42.	Roller Rubber Tyred wheel	220.00	44.00	22.00
43.	Scraper (9.00 cum)	280.00	56.00	28.00
44.	Scraper (6.00 cum)	225.00	50.00	25.00
45.	Sprayer Tar/Bitumen 4546 liters	176.00	36.00	18.00
46.	Truck dozer size-4 D4E	792.00	158.00	79.00
47.	Truck dozer size-2, D8N	2112.00	422.00	211.00
48.	Truck dozer size-4 D4H	660.00	132.00	66.00
49.	Truck excavator GD 250 E	880.00	176.00	88.00
50.	Truck dozer size-2 D 6R	2024.00	404.00	202.00
51.	Truck excavator 320 C GD 250 F	880.00	176.00	88.00
52.	Truck dozer size-2 D6D	1408.00	282.00	141.00
53.	Truck dozer size-2 D85A	1672.00	340.00	167.00

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Ser	Description of plant	Hire charges per working hour with Fuel, lub etc (Taka)	Hire charges per working Hour without fuel, lub electricity etc (Taka)	Hire charges per non working hour (Taka)
(a)	(b)	(c)	(d)	(e)
54.	Vibrator (Engine driven)	10.00	2.00	1.00
55.	Vibrator (Electric driven)	-	6.00	3.00
56.	Well Boring Rig	133.00	26.00	13.00
57.	Wheel dozer 814 B/F	1320.00	264.00	132.00
58.	Wheel loader AS200	880.00	176.00	88.00
59.	Wheel loader 938 G	968.00	194.00	97.0

Note:

1. Hire charge T & P has been fixed based on cost of fuel as on May 07 Petrol Tk. 65.00/ ltr, Diesel Tk 40.00/ ltr).
2. Hire charge of electric operating T&P has been fixed without cost of electricity. Hirer should pay electric bill as per PDB rate.

Refs:

1. AHQ, E in C's Br, Wks Dte office order no 150 dated 02-02-2007.
2. Board of Officers submitted vide CMES (Air) Kurmitola letter no PF/80032/89/E-1 dated 29/05/2007.

HIRE CHARGES OF REFRIGERATORS

Ser	Capacity	Hire charges per month	Remarks
(a)	(b)	(c)	(d)
1.	0.085 To 0.140 Cu. meter	Taka 50.00	
2.	0.141 To 0.200 Cu. meter	Taka 64.00	
3.	0.201 To 0.280 Cu. meter	Taka 75.00	
4.	0.281 To 0.420 Cu. meter	Taka 100.00	
5.	0.421 To 0.560 Cu. meter	Taka 125.00	
6.	0.561 To 0.700 Cu. meter	Taka 137.00	

Refs:

1. AHQ, E in C's Branch Wks Dte office order no 150 dated 02-02-207.
2. Board of officers submitted vide CMES (Air) Kurmitola letter no PF/80032/89/E-1 dated 29/05/2007

**TOOLS & PLANTS HIRE CHARGE
COMPUTATION SHEETS****1. Description of Plant**

- a. Capital cost = A Tk.....
- b. Estimated Working Life. (Ten years) 16,000 Hours = B
- c. Estimated Average Hours Per year 1600 = C

2. Calculation

- a. Interest = $\frac{12}{100} \times \frac{A}{C}$ Tk.....per hr
- b. Depreciation = $\frac{A}{B}$ Tk.....per hr
- c. Maintenance = $10 \times \frac{A}{C}$ Tk.....per hr
- d. Hire charges per working hour
without POL & Crew = (a+b+c) Tk.....per hr
- e. Hire charges non-working
hour = (25% of d) Tk.....per hr

Notes:

- Cost of POL / Electric & crew to be charged at actual along with 10% on cost in addition to 'd' above.
- TA/DA & overtime pays of crew if any to be charged in addition.

Prepared by**Checked by****Approved by**

SDO

GE/Indep AGE

CMES

Ref:

- Annex – D to RI 401 of 1984 E in C's Branch Rawalpindi

SCHEDULE-I

1. Accompanying Hire Agreement between President of the People's Republic of Bangladesh of the one part and M/S.....of the other part in connection with the hiring of Machinery/T&P.

2. **Description of Machinery/Plant**

- a. Name
- b. Make
- c. Maker's No
- d. E&M No
- e. Capacity

3. **Hire Charges**

- a. Per working hour.
- b. Per non-working hour.

4. **Period of Hire**

Signature of Hirer

Signature of owner for and
on behalf of the President of the
People's Republic of Bangladesh.

SCHEDULE-II

1. Accompanying Hire agreement between President of the People's Republic of Bangladesh of the one part and M/S.....of the other part in connection with hiring of Machinery/T&P.

2. **Rates of Hire Charges of Plant**

Ser	Description of plant	Hire Charges for working hour	Hire Charges for non-working hour	Remarks
(a)	(b)	(c)	(d)	(e)

Signature of Hirer

Signature of owner for and
on behalf of the President of the
People's Republic of Bangladesh.

ROUTINE INSTRUCTION NO 403/2008
ROUTINE MAINTENANCE INSPECTIONS AND TEST

General

1. Periodical maintenance, inspections and tests will be carried out on all plant and machinery by MES/EME, according to the laid down responsibilities of each services. The following cover the line on which this inspection etc. will be carried out and reported to higher formations.

Routine Maintenance Chart

2. A definite programme of periodical maintenance of T/P and machinery, to be attended to, will be prepared for each installation by the CMES of each area in the light of repair schedule issued by E inC's branch Wks Dte time to time. It will contain a list of all examinations, check measurements, cleaning, attention to valves, bedding of bearing etc, which are to be carried out during the period together with the days during which are to be carried out.

The following is a typical maintenance chart in respect of Diesel Gen sets in a power House:

Ser	Week	Set-1	Set-2	Set-3	Set-4	Auxiliaries
(a)	(b)	(c)	(d)	(e)	(f)	(g)
1.	1 st week	1 Check Alignment	-	-	-	-
		2 -	-	-	Piston	-
		3 -	-	I V E V	-	-
		4 E V A T	-	-	-	-
		5 -	Pump Clean	-	-	Drain all air
		6 -	-	A T	-	-
2.	2 nd week	1 -	-	Check Alignment	-	-
		2 Piston	-	-	-	-
		3 -	-	-	I V E V	-
		4 -	E V A T	-	-	Clean out oil tanks
		5 -	-	Pump	-	-
		6 -	-	-	A T	-

Ser	Week	Set-1	Set-2	Set-3	Set-4	Auxiliaries
(a)	(b)	(c)	(d)	(e)	(f)	(g)
3.	3 rd week	1 -	-	Check Alignment	-	-
		2 -	Piston	-	-	-
		3. I V E V	-	-	-	-
		4 -	-	E V A T	-	-
		5 -	-	-	Pump clean	Clean out water tank
		6 A.T.	-	-	-	-
4.	4 th week	1 -	-	-	Check Alignme nt	-
		2 -	-	Piston	-	-
		3 -	I V E V	-	-	-
		4 -	-	-	E V A T	-
		5 Pump clean	-	-	-	Clean Heenen Coolers
		6 -	A.T	-	-	-

Note:

1. EV - Strip, grind and attend to Exhaust Valve
2. IV - Strip, grind and attend to Inlet Valve
3. AT - Strip, grind and clean Auto miser
4. Pump - Strip, grind and attend to Pump.
5. Piston - Draws, clean and examine piston.
6. Such chart will be elaborated or a separate chart prepared, covering the quarterly and annual programme of such item, as annual insulation tests of internal wiring, annual overhaul of crane etc.

Technical Inspections

3. Detailed technical inspections by an E/M officer will be made twice a year in the case of E/M installations and once a year in the case T/P of an E/M nature.

4. Inspections will consist of running tests (approximately 50 percent of the sets installed being dealt with at each inspection) and the examination of any plant which may be dismantled for overhaul.
5. Inspecting officer will examine all plant in their area, when it is dismantled for overhaul. All cylinders and pistons both of main and auxiliary plant will be measured by micrometer and the wear recorded.
6. Inspecting officer will at once bring to the notice of the GE/ AGE any cases of negligence incompetence on the part of installation staff, besides including it in his report.
7. A detailed report of each inspection, accompanied by the test results on the forms provided for the purpose, will be made.

Inspection of Steam Raising Apparatus

8. Local MES officers will arrange for the annual inspection by a qualified inspector of all steam raising apparatus in use and of any apparatus, which it is proposed to take into use and which has not been inspected by a qualified inspector, within a period of twelve months. Steam raising apparatus will be held to cover all close vessels used for the generation of steam, main steam pipes, etc and any mounting of other fitting attached there to, which is wholly or partly under pressure, when steam is shut off in all cases when the normal working pressure exceeds 1.16 Kg/cm². It will also cover all auxiliary apparatus such as economisers, which are normally inspected under regulations at the same time as the boiler etc.
9. In areas where the boilers Act is applicable; the inspection of the apparatus covered by the Act will be carried out by the boiler inspector appointed under the Act.
10. In areas where the Boilers Act, as adopted by Bangladesh is not applicable and in the case of apparatus not covered by the Act, the services of any qualified inspector may be arranged for as convenient. The annual inspections of steams raising apparatus under these circumstances may be carried out by officers or subordinates of the MES if in possession of the necessary qualifications and with prior approval of the E in C.

11. Boilers, not covered by Indian Boiler Act (now adopted by Bangladesh) not exceeding 22.5 liters in capacity, and those pertaining to sterilizer infectors not exceeding 90 liters in capacity irrespective of any pressure will be examined yearly under local arrangement by MES staff. At such examination the boiler should be thoroughly sealed and washed out, pipes examined for obstruction and safety valves tested. This also includes domestic hot boilers.

Inspection of Air Bottles and Receivers

12. These are not covered by the Boilers Act. They will be inspected yearly under local arrangement by MES staff. It is most important to ensure that below down pipe and valve are proper working order and capable of preventing any accumulation of liquid in the receiver.

Lubrication

13. The Lubricant referred to in BASC specifications as suitable for the type will invariably be used on MES machinery.

14. Application for permission to use other specifications or proprietary Lubricants not covered by any specification will be referred to E in C, Branch (Wks Dte) with reasons for the demand and a copy of the analysis, so that the range of specifications may be reviewed from time to time to ensure that they cover the actual requirements of modern plant.

Care of Boiler

15. Routine Maintenance will follow the lines laid down in Manufacturers instruction Books, particularly note.

- a. **Boiler Feed.** An analysis is required of all water, which is used for feeding stationary boilers on MES Charge. If the plant in question includes water, softner and analysis should be obtained of the raw water and of water after treatment therein. On receipt of the analysis, the CMES will be responsible to decide that responsibility treatment if any is to be adopted. Where an analysis is unfavorable the possible effect of the untreated water on domestic and other low-pressure boilers (vide paragraph 11) and on the cooling system of mechanically propelled vehicles must be carefully considered and any unit or department concerned warned. No composition is to be used in any boiler without the sanction of the CMES. Such sanction should be recorded in the plant running record.

b. **Cleaning.** Instructions regarding the intervals at which boilers must be washed out and cleaned will be laid down locally in the Routine Maintenance Chart (see paragraph 2). These intervals will depend on the type and evaporative capacity of the boiler and the quality of the feed water used. The best indication is the condition and quantity of the scale, but following figures may serve as a rough guide:

Guide for cleaning period

Ser	Type of Boilers	Cleaning Period
(a)	(b)	(c)
1.	Lancashire and Cornish type boilers	After every 250 to 300 full steaming hours.
2.	Water tube boilers fed unsoftened water	After every 600 full steaming hours.
3.	Water tube boilers fed with softened water and returned condensate.	After every 1000 to 2000 full steaming hours.
4.	Locomotive boilers	After every 100 full steaming hours.
5.	Vertical boilers working irregularly.	After every 3 months.

In all cases the scale removed from a boiler must be collected and retained for examination by the inspecting officer and he should be requested to express his opinion as to whether the boiler is being washed out and cleaned sufficiently/frequently.

c. **Lagging.** The lagging of boilers and steam pipes will be carefully examined at the periodical inspections.

Care of Steam and Oil Engines

16. Routine Maintenance will follow the lines laid down in the Manufacturers instruction books. The cooling water for oil engine will be analyzed and treated as in boiler feed. A full report on the amount and location of scale will be made in the plant running record. Dust and dirt, being a particularly active source of wear, must be excluded to the utmost

extent both from the working surfaces of valves and cylinders by fitting efficient oil and air filter & from other surface by maintenance all doors & windows and all inspection and other covers in a close fitting condition and closed wherever possible. These orders apply equally to locomotive and portable engine and boilers.

Care of Electric Motors and Generators

17. Routine Maintenance will follow as laid down in manufacturer's Instruction Book. As in the case of steam and oil engine, particular care must be taken to exclude and remove dust. Air at pressure not greater than 2.10 KG/Sq cm will be used for its removal.

Care of Pumping Plant

18. Routine Maintenance will follow as laid down Manufacture's Instruction Book Particularly note.

- a. Check alignment of the pump and motor.
- b. Check gland packing, if more required insert one new ring of packing.
- c. Check gland, if loose, tighten it up and see that 1 to 2 drops of water are oozing to ensure cooling of the glands.

Care of Compressor, Refrigerators and Miscellaneous Machinery

19. Routine Maintenance will follow the lines laid down in Manufacturer's instruction Book supplemented by any Technical Instructions issued by the E in C.

Care of Concrete Mixers

20. The mixer machine should be run at the speed laid down by the makers. Any reduction in speed results in serious loss of efficiency in mixing. In revolving drum mixers this speed is normally 17 rpm. At this speed a time of mix of one minute is sufficient. Revolving drum mixers have general defect regarding interchange of materials from one end of the drum to the other.

21. This can be minimised by:
 - a. Scrupulous cleanliness of the inside of mixer.
 - b. Placing the components of the mix in the mixer in the following order:-

First Course Aggregate, then Cement and Finally Sand.

22. Discharging the mix into an intermediate hopper before transporting it to the point of deposition.

This supersedes Routine Instruction No 400 & 405 of 1990

ROUTINE INSTRUCTION NO 404/2008
NUMBERING AND RECORDS ETC

Applicability

1. This instruction applies to all plant & Machinery, whether static or mobile, which is mechanical or electrical issued to all MES Electrical and water supply installations etc.
2. It also applies to all mechanical transport of Engineer and Ord origin issued to the MES.

Numbering of Plant & Machinery

3. Numbers (except local) will be allotted by each DW&CEs for his own Plant & Machinery and by E in C's Br for E in C's T&P.
4. Three numbering system will be employed:-
 - a. MES Numbers for Installed plant.
 - b. E/M Numbers for Mobile plant.
 - c. Local Numbers for Minor E&M plant.

Note:

Mechanical Transport already held by MES units will retain their existing Nos. No new BA Nos will be allotted to the vehicles issued from Ordnance.

5. Number shall be painted on all machines in a conspicuous position, or in the case of BA numbers as prescribed by civil Law and Military orders.
6. Plant or Machinery returned to workshops for repairs including Field & Base repairs, will retain its number.
7. Plant permanently coupled, except when run of shafting; will be given one number only. Similarly attachments e.g. bull dozer blades, will not receive separate numbers. In only exceptional circumstances, a component can be detached temporarily from its parent plant and that too by the permission of respective DW&CE. The numbers will, however, remain unchanged.

8. DW&CEs will prepare and maintain eleven “Installed Machinery Registers” and twenty “Mobile plant Registers”. These registers will be maintained according to family of the machine as detailed in Annex - A and ‘B’ Numbering of Plant & Machinery shall be done on the basis of these registers. All cuttings/ alterations/ additions/shall be initialed by SO E/M of respective DW&CEs. One set shall be forwarded to E in C (Wks Dte). All additions/alterations shall be intimated to E in C (Wks Dte) by respective DW&CEs, as and when necessary. Proforma for “Installed Machinery Register and Mobile Plant Register” is given in Annex - C.

MES Numbers

9. These will be painted on all Installed plant. The number will consist of three parts.

- a. An alphabetical letter indicating the family of the machine (As detailed in Annex - A).
- b. A Serial number commencing from unity in each family.
- c. An alphabetical letter indicating the MES wing to which the plant belongs i.e. ‘A’ for Bangladesh Army; ‘AF’ for Bangladesh Air Force, ‘N’ for Bangladesh Navy.

E/M Number

10. These will be painted on all Mobile plants and Machinery and will consist of three parts.

- a. An alphabetical letter indicating the family of the machine as detailed in Annex -B.
- b. A serial number of four digits.
- c. An alphabetical letter indicating the MES wing to which the plant belongs i.e. ‘A’ for Bangladesh Army AF for Bangladesh – Air Force. ‘N’ for Bangladesh Navy.

Local Numbers

11. Local numbers will be given in each station to minor EM plant as follows:

- a. Air Condition
- b. Refrigerators
- c. Cold Stores
- d. Fans
- e. Meters

The numbers will be painted on this plant in a conspicuous position. The lettering MES, EM and BA will NOT be employed on such plant.

Machinery Records Machinary History Sheet

12. Machinery history sheets will be maintained on the appropriate BAFW for all MES Machinery. These forms with the index sheet will be kept in a loose-leaf cover by the SDO i/c E&M plant. In the event of Machinery being transferred from one station to another, the machinery History sheet maintained, will accompany it. If particulars of any machinery are called for a copy of Machinery History sheet or other available record of the plant will be supplied.

Fan & Meter Register

13. BAFW-2181 will be maintained for each installation. The instruction regarding the method of maintaining these records are given in the beginning of the books.

Tools, Equipment of Plant

14. A list of the authorised equipment of sets, machines, tools, switch boards etc will be signed on each page by the GE/AGE/SDO and SAE, E/M responsible for their safe custody and will be pasted inside the lid of every tool box and beside every tool rack, Copies of the lists will be pasted into the numerical ledger of small installation Tools with an index. As great a proportion as possible of the total Equipment of any installation will be covered by these lists and all deficiencies from whatever cause will be made good immediately. On any authorized change in the equipment of a set etc, an entirely new list will be prepared.

Numerical Ledger of Small Tools etc.

15. The numerical ledger of small installation and tools will be a bound manuscript book with machine numbered pages. In addition to the

authorised tool equipments lists by sets, it will contain column headings for each items of miscellaneous tools and instruments on permanent installation charge, the number of which are subject to fluctuation. The ledger will normally be kept by the SDO and a carbon copy of each page by the SAE, E/M.

Register of Military Installations and Plant

16. Register of Military Installations and plants will be maintained on form BAFW-1828 and kept up-to-date by each SDO, AGE, GE, CMES, DW & CE and E in C through annual returns (Form BAFW-1836).

Capital Records

17. On completion of an E/M installation, all capital expenditure will be recorded as under:

- a. Internal installation in buildings, other than those in building forming part of the E/M installation proper, will be entered in the register of building (see para 345 Regulations for the MES).
- b. Perimeter lighting and other authorised external military lighting will be shown in separate registers.
- c. All other capital expenditure will be entered in the plant record book (BAFW-2208) of the installation and will represent the capital value of the 'Installation proper'.

18. Where a MES pumping or other installation is supplied with electrical energy from a MES electrical under taking, the capital cost of the supply lines, etc will be shown in the Plant Record Book (BAFW-2208) of the electrical undertaking. This applies whether energy is generated by the MES for electrical undertaking, any capital expenditure incurred by MES on supply lines; etc will be shown in the Plant Record Book of the pumping or other installation concerned (see para 745, Regulations for the MES).

19. The above records will be amended as necessary, whenever additions, alterations, or renewals, which effect capital cost, are carried out.

20. In calculating the capital cost of an internal installation in a building in the following rules are to be observed:

- a. Normally the internal installations will include everything on the consumer's side of the meter up to which (inclusive) the distribution system extends.
- b. When there is no meter and the installation is connected to the MES supply main the internal installation will be considered to commence on the consumer's side of the main switch stopcock or valve controlling the supply to the building.

Plant Record Book

21. A Plant Record Book (BAFW-2208) will be maintained for each installation. The instructions, regarding the method of maintaining this record are given in the beginning of the book. Verification of plant will be carried out annually by any E/M officer to be detailed by CMES, and a certificate rendered on 31st July by CMES, that this has been done giving the date of verification at each installation through the respective DW & CEs to E in C's (Wks Dte) Br. In case no E/M officer is on his strength the CMES may authorize any other officer to carry out this verification.

Depreciation

22. For the purpose of cost accounting and comparison of alternative schemes of supply of water and electricity, etc the following rates of depreciation will be assumed.

Rate of Depreciation

Ser	Property	Depreciation percent per annum of original value
(a)	(b)	(c)
1.	Land, earth work	Nil
2.	PT Buildings of all types, brick Concrete and masonry channels, drains, filters, reservoirs, tanks and wells.	1%
3.	Foundation and staging	At the rate laid down for the plant supported.
4.	(1) Brick chimneys, concrete and earthen ware pipe. (2) Aerial lines	3% 5%

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Ser	Property	Depreciation percent per annum of original value
(a)	(b)	(c)
5	Steel and iron pipe and fittings, mechanical filters, water softening plants, tanks.	5 %
6.	Air receivers of all kinds, boilers and stockers, condensers, Compressors, cranes and lifts, electrical generators, motor converting and transforming plant and switch gear, fuel and ash plants, insulated cables and internal wiring, prime movers of all kinds, pumps, refrigerating and Air Conditioning plants and installed Apparatus (if any).	10 %
7.	All portable plant ic welding machine, Battery charger, grinding machine, voltage stabilizer, Gondola & of the above category machine tools.	7 %
8.	Instruments of all kinds, road making plant, small tools, water treatment plant except as above	10 %
9.	Deep Tube well with fixers, hand tube well and all type of fire fighting equipments/ Fire hydrant.	12 %
10.	Ceiling fan, Table fan, Pedestal fan, exhaust fan, wall mounted fan .	10 %
11.	TY - Buildings	5 %
12.	Chlorination plant	10 %
13.	Fuel tanks	5 %
14.	Copper pipe	3 %
15.	All type of Medical gas plants/equipments	10 %

Refs:

1. AHQ, E in C's Branch office order no 150 dated 02-02-2007.
2. Board of officers submitted vide CMES (Air) Kurmitola letter no PF/80032/89/E-1 dated 29/05/2007.

Borehole Charts

23. During any boring and well development operation a cloth tracing will be kept up-to-date in respect of data of a permanent nature. It will show:

- a. A small inset sketch for identification showing position of the well relative to fixed features and other bores in the vicinity.
- b. Ground level height above mean sea level as a reference level to which all boring levels will thereafter be referred.
- c. All strata levels and thicknesses, dates reached and particulars of strata.
- d. Diameter of bore. White prints from the up-to-date chart will be taken off after each month of working (unless otherwise ordered) for submission to the CsMES, DW&CEs & E in C (Wks Dte) and on these prints will be endorsed.
- e. Diameters and lengths of drive pipe to date.
- f. Water levels.
- g. Brief annotation in explanation of delays, changes in drive pipe section etc in type. On completion of any complete stage of the work the following additional information will be added to the tracing:
- h. Diameter and length of each section of final well case and strainer.
- j. Type and maker of strainer.
- k. Cubic meter of gravel shrouding added in each water bearing stratum and particulars of auxiliary gravel pipes, if left in situ. After pumping strata, further prints will be endorsed in type with particulars of:
 - (1) Yield and duration of test, depression level and working level, interference between adjacent wells, prevalence of sand, etc.
 - (2) Addition of further gravel shrouding after the well is put into regular commission prints should be submitted annually for the first two years endorsed with.
 - (3) Working conditions and maximum seasonal fluctuation in rest and working levels. Thereafter only marked deterioration should be reported for endorsement of the record prints held by CsMES, DW&CEs and E in C (Wks Dte).

Installation Running Record

24. Installation Running Record book will be kept up at all important E&M installations (as decided by CsMES) in order to maintain a record of the actual running of each installation. This book will be a manuscript book ruled as required. It will contain the following information as well as any other records, which it may be locally decided to keep:

- a. Record of periodical examinations Crank shaft alignment tests, overhauls, insulation tests, etc both on plant on distribution items are carried out. The Routine Maintenance Chart as per EME checked and signed by the GE/SDO time to time to see adhered to. The SAE, E/M will also enter details of all special incidents such as accidents break down, repairs etc.
- b. Records of all consumption and other tests-Any indicator cards taken will be attached.
- c. Records of all fuel used per unit of out turn daily for each set. This record will enable a check to be kept on the amount of fuel used and any fall in the efficiency of the plant to be detected immediately. The guaranteed consumption figures should be given at the beginning.
- d. Record of all official inspection. This will show the date and nature of the inspection and tests if any and by whom made together with report and recommendation regarding pressure, essential repairs etc; the entries should be signed by the inspecting officers.

Log Sheets of Installation

25. In order to keep an accurate record and check of the efficiency of the various E/M installations, log sheets will be kept on the appropriate BAFs. These log sheets will be accurately maintained since the figures there in comprise the date from which the monthly and annual returns are compiled. The DW&CEs will decide whether all particulars in the standard sheet need be maintained. In cases where no standard form is suitable, manuscript forms may be used with the sanction of the DW&CEs.

Log Books of Road and Miscellaneous Machinery

26. The 'Log Book' Road Roller (BAFW-2179) will be maintained for each roller.

General Instructions and Notes on Working are Included in the form

27. Similar records will be maintained for other machinery of an electrical or mechanical nature.

28. Record of Tests of Lightning Conductors. The pages allotted to description and plan of conductors in BAFW-2215 will be completed as follows:

a. Outline copies of tracings of such plans, as may be required to show the positions of the buildings protected, the roads, earth connections and general course of the conductors, Copper conductors will be shown by red lines and iron conductors by blue lines. The reds will be designated 1, 2, 3 etc the conductors a, b, c, etc and the earths E1, E2, E3 etc to correspond with the descriptive record (see (ii) below).

b. Drawings of such details as may be of service at inspection or when repairs become necessary.

c. A descriptive record containing as many of the following particulars as possible:-

(1) Date of erection or reconstruction of lightning rod.

(2) Character of soil and substrata and depth of permanent water level or wet soil.

(3) Full particulars of lightning rod, conductors, and earth connections, nature of joints, connection, etc.

(4) Details of all external and internal masses of metal contained in the construction of the building and how connected to conductors.

(5) In the case of magazines, the quality of explosive etc, kept in stores.

(6) Position of test joints, if any, nearest earth available for testing etc.

(7) Details of last inspection and precis of former tests, suggestions etc of inspecting officer.

(8) To whom notice of inspection should be sent, so that ladders may be ready or getting on the roofs etc.

Maintenance of Log Sheets/Books

29. The GE/AGE responsible for the installation of Machinery will also be held responsible for any neglect of duty for the non-maintenance of log sheets/books for E/M installation and other machinery of an electrical or mechanical nature, as required vide para 24-27.

Vehicle Record and POL Accounting

30. These instructions are applicable to all mechanically propelled vehicles on charge of MES.

31. The following documents will be maintained:

- a. VDRA BAFZ-2212
- b. Duty slip BAFZ-2007
- c. Drivers Car Diary BAFZ-2209
- d. Vehicle log Book BAFZ-2197
- e. Vehicle Register BAFZ-2186
- f. Monthly Vehicle Return-BAFZ-3020

Vehicle Daily Running Account (VDRA) BAFZ-2212

32. The milometer /kilometer reading and the Motor spirit in the tank of all vehicles will be checked at least once daily. In case the milometer /kilometer reading is not recorded in column 9 of this Register owing of the absence of or any actual mechanical defect in the milometer/kilometer of the vehicle, a certificate from the CMES/GE/ AGE or his authorised MTO concerned, that the running has been carefully checked the POL has been used for bonafide Govt duties and there has been no misuse of Petrol/Diesel will be accepted for audit purpose after scrutiny of the relevant entries in the drivers car diary and duty orders for rough check over the mileage/kilometer and Petrol /Diesel consumption recorded.

33. Duty slip BAFZ-2007 introduced by Govt of Bangladesh:

- a. The revised duty slips BAFZ-2007 are machine numbered. A register should be maintained by each formation showing books from No.....to No.....held on stock and from No..... to No.....in use /used.

b. All columns of the duty slip will be filled up properly as applicable to MES e.g. STO indents No etc, part IV need not be filled.

c. Care should be taken to ensure that part V is always filled up correctly. The columns Petrol/Diesel. 'In tank out' and 'In tank on return' should be entered by actual measurement of Petrol/ Diesel in the tanks by Dipping. In a vehicle where facilities do not exist for measuring by Dip stick and where such provision is not practicable, the amount of Petrol/Diesel remaining in the tank after the days run may be ascertained from the Petrol gauge and recorded accordingly, and in this latter case the log books will be endorsed with a certificate by the CMES/GE concerned, that it is not practicable to measure by dip stick.

d. In case where the mileage/kilometer covered during the day is small, the consumption may be assessed on the basis of TMPG/TKPL for the particular type of vehicle.

Drivers Car Diary BAFZ-2209

34. These should invariably be maintained for all vehicles including M/Cycle. Instructions for maintenance of the diary are printed on the inside of the front cover.

Vehicle Log Book BAFZ-2197

35. These should also be maintained for all vehicles. Instructions for maintenance of the log book are given on the first page of the log book.

Unit Vehicle Register BAFZ-2186

36. This is a register showing the holding of vehicles in a unit. This should be maintained correctly. The casualty published and any change brought up in the strength of the vehicle holdings should be entered.

Monthly Vehicle Return BAFZ-3020

37. The return should be submitted to DW & CE's by 15th of each month. The following procedure will be adopted for preparation of the returns:

- a. Vehicles will be entered in the following sequence:
 - (1) Motor Cycles.
 - (2) Staff Cars
 - (3) Station Wagons
 - (4) 750 Kg-includes Jeep, S/Wagon, pick up and 750 Kg Trucks,
 - (5) 3000 Kg lorries
 - (6) 5000 Kg Lorries
 - (7) 20,000 Kg Transporters.
- b. Class IV, V and VI MT will also be shown in the above sequence at the bottom of the return till struck off from the unit strength after having been transferred or disposed off.
- c. All columns of the return are to be filled in very carefully. The classification column G should be filled up in accordance with Ex-POA -730/48. The Category column H will be filled up in accordance with the note at the right hand top corner.
- d. The reasons for high consumption of petrol and engine oil should be endorsed in the remarks columns.
- e. A certificate to the effect that "The MPG/KPL figures are reasonable correct and that every possible economy has been exercised should invariably be endorsed in return.

38. The competent authority in sanctioning the move of MES vehicles are as follows:

- a. Within GEs/AGEs Division by the GE/AGE if independent.
- b. Outside a parent Division but within the area of the CMES by CMES.
- c. Outside the area of a CMES but within the area of DW & CEs by DW & CEs.
- d. For all stations outside the area of DW&CE/CMES (i.e.) inter area moves by E in C.

Delegation of Sanctioning Authority

39. Authorised specified in (a) to (d) above may delegate their power of sanctioning moves of vehicles to their staff officers:

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Ser	Competent Authority	Delegated Authority	Remarks
(a)	(b)	(c)	(d)
1.	E in C	D Wks	Not below the rank of Col/CE
2.	DW&CEs	SO-I	Not below the rank of Lt Col/SE
3.	CsMES	DCMES	Not below the rank of Maj/XEN
4.	GEs	AGE	Not below the rank of Capt/AXEN
5.	Independent AGEs	AE/SSAE	Not below the rank of AE/SSAE

a. Applications for inter area moves will be submitted to E in C's Branch normally a week before the move is due. In urgent cases, authority will be obtained by signal or telephone prior to the move.

b. When using Govt transport the Senior Officer/person will ensure that no un-authorized person are allowed to travel in the vehicle. The duty slip should indicate the number of persons and their designations, travelling in the vehicle. It should also indicate the exact nature of duty and the specific place to be visited.

c. For "Recreation purposes" the unit MTO is authorised to detail a vehicle, if available. In such cases the duty slip should be endorsed in red ink "On Hire" and a board marked "On Hire" should be fixed to the front bumper of the vehicle.

40. When vehicles are detailed for duty, the driver should always be in possession of the following documents:

a. Staff cars and Motorcycles (For station duty only)

- (1) Drivers car diary
- (2). Driving licence both Military and Civil in case of Civilian drivers and only Military licence in case of Military drivers.
- (3) Accident report form
- (4) Vehicle log book
- (5) AB-64- M for Military drivers only
- (6) Form C vide Motor vehicles Act 1946

b. Staff Cars & Motor Cycles(For outstation duty) Jeep, Station wagons (For both station and out station duties)750 Kg. pick ups and 3000/5000 Kg. lorries etc. Documents mentioned in 1 above plus duty slip signed by proper authority.

REPORT & RETURNS

Casualty Reports

41. **Installed Plant.** Accidents and Major Breakdown in E/M installations will be reported immediately to E in C's branch (Wks Dte) by signal in case of serious breakdown, which will effect essential services or when personal are seriously injured.

42. A report of plant 'BER' will be submitted to the DW&CEs within fourteen days of receipt of this declaration.

43. A report on issues/receipts of plant will be submitted to DW & CEs as per Annx 'D' to RI within fourteen days of receipt / issue.

Mobile Plant

44. A report on mobile plant 'BER' will be submitted to the DW & CEs within fourteen days of receipt of this declaration.

45. A report on issue/receipt of mobile plant will be submitted to the DW&CEs as per Annex-D to this RI within fourteen days of receipt/issue.

46. A report on MT vehicles 'BER' will be submitted to the DW&CEs within fourteen days of receipt/issue of this declaration.

47. A report on issue/receipt of MT vehicles will be submitted to DW&CEs as per Annex-D to this RI within fourteen days of receipt/issue.

Monthly Returns

48. Monthly returns on the appropriate BAF will be prepared for each E/M installation and workshop, giving a summary of the month's working. One copy will be forwarded to the CMES by the middle of the next month for scrutiny and check to enable him to judge, whether the various installations are being efficiently and economically run. To this end expenditure figures must be absolutely upto date to the end of the month rather than accurate within less than a few taka. Quantities not yet billed will be estimated.

49. CMES may make such minor modifications in the forms, as are considered necessary, provided the main principles are not altered.

M. T. Vehicles

50. Monthly vehicles return on BAFW-3020 will be submitted to the respective DW & CE.

Annual Returns

51. Annual returns of all installed and mobile plant will be submitted on form BAFW-1836.

52. A separate return BAFW-1836 is required for each entirely separate installation. If two or more installations are inter-connected in one station, only one return is required.

Comparative Statement

53. Annual comparative statements will be prepared by DW & CEs from the annual Returns in accordance with the Regulations for the MES (Para-743). A separate statement will be prepared for each of the main services, electrical, water supply and ice installations on the forms notified by the E in C periodically.

This supersedes Routine Instruction No 406 of 1990

INSTALLED MACHINERY REGISTER

Ser	Type	Category	Remarks
(a)	(b)	(c)	(d)
1.	Diesel Engine	A	
2.	Engine other than Diesel	B	
3.	Crane, Crab or winch, Traveller or lift	C	
4.	Pumps	D	
5.	Transformer, Balancer & Voltage Regulator, switch gear, PFI	E	
6.	Compressor, Air Conditioner	F	
7.	Machine Tools	K	
8.	Miscellaneous Machinery	L	
9.	Rectifier or Converter	M	
10.	Boilers (Steam)	S	
11.	Electric Motor, Generator Alternator, or Exciter	T	

Ref:

1. Appendix –‘A’ to RI No 406/1990

MOBILE PLANT REGISTER

Ser	Type	Category	Remarks
(a)	(b)	(c)	(d)
1.	Diesel Engine	A	
2.	Engine other than Diesel	B	
3.	Cranes, Wheeled	C	
4.	Pumps	D	
5.	Road Rollers, All types	E	
6.	Compressors	F	
7.	Concrete, Motor, etc Mixers	H	
8.	Stone Crushers, Granulators	K	
9.	Miscellaneous plant	L*	
10.	Dumpers	M	
11.	Scarifiers	N	
12.	Tar, Bitumen etc. boilers, sprayers	P	
13.	Crawler Tractors	R	
14.	Boilers steam	S	
15.	Generator AC or DC and electric motors	T	
16.	Crawler cranes, Excavators etc	U	
17.	Graders, Motor and Towed	V	
18.	Well Boring Rigs	X	
19.	Tractor Wheeled	Y	
20.	Trailers	Z	

Note:

1. Includes rooters, harrows, ploughs, mowers and decauvilled rolling stock except locomotive welding set, etc or any item not specifically included in this list.

Ref:

1. Appendix –‘B’ to RI No 406/1990

1. **Installed Machinery/Mobile Plant Register**

- a. Description of Machines:.....
- b. Detail of Driving Machines:

2. **Particulars of Machine, Makers Name, Maker's Number, Type or Model**

- a. Horse Power
- b. Detail of Driven Machines
- c. Capacity
- d. Location
- e. Condition
- f. Date of Installation
- g. Unit Holding

CASUALTY REPORT

No
Date.....
Station.....

To
The

Subject: Issue/Receipt of Plant-Machinery & MT Vehicles

The following plant, machinery, MT vehicles have been received/ issued:

Ser	Description	MES E/M BA No	Received from/issued to & date	Nature of issued PT/Ty	Authy	Remarks
(a)	(b)	(c)	(d)	(e)	(f)	(g)
Condition Report					Present Classification	

1. Major Changes in attachments
2. Repairs required
3. Items missing (if any) and reasons
4. List of books, parts catalogues, instruction and log book etc.
5. List of tools and spares, despatched with machine.

Whether written off give
Authority with date.

Signature of GE/AGE

CHAPTER-II

ROUTINE INSTRUCTION NO 405/2008

REFRIGERATION EQUIPMENT

Responsibilities & Procurement, Installation & Maintenance of Refrigerator Equipment

1. The responsibility of procurement, installation, maintenance and operation of refrigeration eqpt. in use are defined below:

Procurement

- a. MES is responsible for:
 - (1) All types of refrigeration eqpt. for Army and Navy.
 - (2) Air conditioning eqpt of capacity 3 Tons and over and ice making plant for B.A.F.
- b. BAF is responsible for:
 - (1) Domestic refrigerations of all capacities.
 - (2) Air conditioning eqpt. below 3 Tons capacity.

Installation

- a. MES is responsible for installation of equipment as shown under 1 (a) above.
- b. BAF is responsible for installation of equipment as shown under 1(b) above.

Maintenance

- a. MES is responsible for:
 - (1) Unit repairs of all eqpt falling under para (a) above. Two years spares will always be maintained for unit repairs by MES formations.
- b. BAF is responsible for:
 - (1) Domestic refrigerations of all capacities and air conditioning plant below 3 Tons

2. The term "MAINTENANCE" is to be interpreted to include servicing, repair and provisioning for spare parts.
3. Fan of water circulating type coolers e.g. Desert coolers are not covered by these instructions. These will remain on the charge of MES, who will be responsible for maintenance.

Operation

- (a) Window and split type air conditions shall be operated by the users.
- (b) MES is responsible for the operation of water/air cooler Central/Package Air conditioning plant.
- (c) Scale for the employment of motor attendants for operation of air conditioners is given in Annex 'A' to this R I.

This supersedes Routine Instruction No 450 of 1990.

SCALE OF MOTOR ATTENDANTS

Designation	No of Air conditioners within 30 meter dia area per shift				Remarks
	1 Set	2 Set	3 Set	4 Set	
(a)	(b)	(c)	(d)	(e)	(f)
Motor Attendants	1	1	2	2	

Ref:

1. Appendix – A to RI 450 of 1990.

CHAPTER-III

ROUTINE INSTRUCTION NO 406/2008
ELECTRICAL AND MECHANICAL INSTALLATIONS
PROTECTION AGAINST ELECTROCUTION

1. Protection of workmen against electrocution needs no emphasis. It should be stressed on all concerned that every possible precaution should be taken prior to and during the repair of faults to avoid accidents.

2. Although it is very difficult to lay down a definite drill covering all cases, however, broad-line details are laid down as under for guidance and strict compliance

a. **LT Supply.**

(1) Under no circumstances repair/maintenance or rectification of fault will be permitted to be attended without proper tools, which must be in sound condition i.e.

- (a) Ladder of proper length.
- (b) Safety belt.
- (c) Rubber gloves.
- (d) Insulated plier.
- (e) Rubber Shoes.
- (f) Insulated Torch or suitable lighting arrangement for work at night or in dark places.

(2) No attempt will be made to rectify the fault on the lines during rain.

(3) Where possible proper shut down will be obtained.

(4) In case of shut down, Officers on duty (SAE) will instruct SBA for shutdown who will record date, time and circuit number in the Log Book.

(5) SBA will take out Fuses and put them separately under lock and key.

(6) SBA will hang a board "Men working on Line" on the switch controlling such supply line.

(7) SBA will be personally responsible that switch is not put 'ON' unless Permission of shutdown is cancelled and signature of duty officer (SAE E/M) working on the line is obtained in token of work done.

(8) To ensure safety prior to climbing, lineman will throw a chain on the distribution line, one end of which will be earthed.

(9) If shut down is not possible, the fault will not be attended unless:

(a) It is ensured that the ladder is properly placed and is fit for climbing in all respects.

(b) That one or two men, as the situation permits, are holding the ladder in position while defect is being attended.

(c) Lineman will be personally responsible to use lineman belt immediately on climbing the ladder.

(d) Lineman will be personally responsible to use gloves while attending the faults.

(e) Proper care will be taken to attend a fault in middle of span when there are no people nearby. In such cases two ladders will be married to improvise a type of step-ladder. In this case, ladder under no circumstances will be allowed to rest against conductors.

b. **HT Supply.**

(1) Under no circumstances repair / maintenance / fault rectification will be undertaken on LIVE H.T. Line & Switch gear.

(2) Only highly skilled lineman would be allowed to attend faults on Live H T lines and switch gear.

(3) Duty officer (SAE E/M) his signature will direct SBA i/c on duty to open the specific circuit of particular section.

(4) SBA i/c will make suitable entries in the Log Book indicating date, time cut off, circuit number if any and purpose for which supply is being cut off.

- (5) SBA will then open the particular switch and will take out oil circuit breaker from the cubicle and will lock it.
- (6) A Notice Board that the "MEN WORKING ON LINE" will be hung by the SBA on the particular cubicle.
- (7) SBA will then give in writing to Duty officer (SAE E/M) or lineman "PERMIT TO WORK" that the specific section has been de-energized and he may proceed to work.
- (8) Prior to attending the fault the lineman will throw a chain from the ground on the line to ensure its deadness. One end of the chain will be temporarily earthed during the period men are working on O. H. Lines.
- (9) The ladder will be securely fixed with the help of rope of men. under no circumstances lineman safety belt will be discarded.
- (10) On completion of repair/maintenance Lineman i/c will remove chain and shift ladder etc from site.
- (11) Lineman i/c will report back to SBA in person, give in writing to re-energise the line or close the circuit.
- (12) The "Permit of Work" will be cancelled and energy restored. Necessary entry will be made by the SBA in Log Book giving exact time of restoration of supply.

Note:

1. HT barrel fuses would never be replaced without the help of HT insulating rod.

ROUTINE INSTRUCTION NO 407/2008
ELECTRICAL INSTALLATION – INSULATIONS TESTS

1. All insulation tests of internal electrical installations will be carried out by a competent person not below the rank of SAE E/M.
2. Special attention will be paid to the following:
 - a. Testing of the earth which will be carried out with the aid of a direct reading earth testing megger or by the ‘Three Earth’ method.
 - b. Insulation test to each conductor of earth will be carried out with all lamps in circuit, ensuring that none of the lamps is fused and with all switches in the ‘ON’ position.
 - c. Insulation test between conductors will be carried out with all lamps removed and switches in the ‘ON’ position.
 - d. Where wiring in conduit mineral insulated on lead covered wiring is installed all “Bonding” will be carefully inspected and tested for continuity.
 - e. All cutouts, main switches and distribution boards will be inspected for faulty insulation and to ensure that the correct size fuse wire exists and that all seals are intact.
3. Attention is invited to I E E Regulation paras 1103-1107.
4. ACs MES E/M and AEs E/M will make periodical physical checks of completed test sheets and will enter the result of their checks on the relevant test sheets. They will take immediate action to rectify defects noted.
5. All distribution boards and main switches will be sealed and as the meter Reader will, when recording meter readings monthly, checked all seals. Seals found broken or tampered with will be recorded in the meter reader’s books and a report made to SDO in charge distribution board/switch.
6. During the half-yearly inspection of buildings, SDOs will check that no unauthorized connections or extension has been made. This fact will be recorded in a separate register.

This supersedes Routine Instruction No 461 of 1990.

ROUTINE INSTRUCTION NO 408/2008
ELECTRICAL INSTALLATION – WALL SOCKETS

1. In accordance with regulation for the electrical equipment of building (IEE Regulation) all exposed metal parts, except the current carrying parts of portable apparatus must be effectively earth. The normal practice is to make use of a third conductor in the flexible cord as the earthing medium and three pin wall socket and plug i.e. two pole and earthing pin plug and socket.
2. In all installations where wall sockets are required they will be of the THREE PIN SOCKET TYPE, with the THIRD POINT suitably earthed.
3. TWO PIN SOCKET may exist or provided as per users request, otherwise these will be replaced as early as possible with the THREE PIN TYPE.
4. All portable apparatus such as fans, table fans etc. issued by the M E S in which any of the metalwork, other than current carrying parts is exposed will be fitted with flexible cord and plug as in para (1) above.

This supersedes Routine Instruction No 462 of 1990.

ROUTINE INSTRUCTION NO 409/2008
ACCOMMODATION ON THE CHARGE OF MES
ELECTRIC CHARGES PAYMENT AND
UTILIZATION OF CONTINGENCIES PROJECTS

Accommodation

1. Electric energy consumed by the occupants of all the accommodation on the charge of MES irrespective of Govt. hired/requisitioned will be charged by the MES at “All Bangladesh Rates” MES will be further responsible to pay the bills to the electric supply agencies concerned. No such consumer will henceforth, pay the bill in respect of the electric energy consumed by him, direct to any other agency except MES.

Utilization

2. Para 280 of MES Regulations permits provision of special T&P in Project Estimates. Similarly para 172 MES Regulations deals with T&P required for any particular service cost of which cannot be met from the Sub Heads indicated in para 169. Despite these provisions, situation can arise when special T&P is to be procured for a project, which could not be foreseen at the time of preparation of the estimates. To cater for such a situation it has been decided that any special T&P needed during currency of work can be purchased against the sanctioned project and expenditure charged to the item of ‘Contingencies’ included in the sanction.

3. DW & CEs will ensure that this permission is used judiciously.

This supersedes Routine Instruction No 464 of 1990.

ROUTINE INSTRUCTION NO 410/2008
AUTHORISATION OF STAFF IN E&M INSTALLATION

1. As in the case of permanent gangs for B&R and F&S Sub-Division, Cs MES will sanction the number and trades to be employed in E & M installation as per Annex-A.
2. Exceptional cases where it is necessary to exceed those ruling accompanied by full reasons in justifications there of. This case should be very rare.
3. It is not intended that staff should be increased to the maximum scale as many places local conditions may enable this to be reduced. On the contrary, present numbers reviewed to effect reductions should increase no present numbers.
4. Special stand by installations will be considered on their merits by CMES bearing in mind that the utmost economical measure will be enforced.

This supersedes Routine Instruction No 451 of 1990

SCALE OF STAFF FOR E&M INSTALLATION**1. Power House**

Ser	Designation	Generating sets in operation per shift in one compound						
		1 Set	2 Set	3 Set	4 Set	5 Set	6 Set	Extra 2 sets above 6 sets
1.	Charge hand	-	-	1	1	1	1	-
2.	S B A	1	1	1	1	1	1	-
3.	Engine Operator	1	1	2	2	3	3	1
4.	Mechanical Fitter	-	-	1	1	1	1	-
5.	Assistant Tradesman	-	1	1	1	1	1	1

Notes:

- 1 extra relief for serial 2 to 5 will provided in installation which operates on 3 x 8 hours shift basis from day to day and where 3 or more sets are in operations per shift.
- No SBA is permissible for one generating set in operation per shift of less than 50 KW capacities in which case the Engine driver will operate the switchboard.

2. Pumping Installation (Including Several Small Installations Within 2 Kilo Meter Area) (Except Serial-2)

Ser	Designation	Pumping sets in operation per shift						
		1 Set	2 Set	3 Set	4 Set	5 Set	6 Set	Extra 2 sets above 6 sets
1.	Charge hand	-	-	1 (a)	1 (a)	1 (a)	1 (a)	- (a) per station
2.	MPA	1	2	2	2	3	3	-
3.	Pipe Fitter	-	-	1 (a)	1 (a)	1 (a)	1 (a)	1
4.	Assistant Tradesman	-	1	1	1	1	1	1

3. Air Conditioner & Refrigeration

Ser	Designation	Air conditioner in operation per shift				Room Air cooler	Refrigerator
		1 Set	2 Set	3 Set	4 Set		
1.	Air conditioner/ Ref Mechanic	1	1	1	2*	1*	1**
2.	M P A	1	1	2	2	-	-
3.	Assistant Tradesman	-	1	1	2	-	-

4. Electric Distribution (External) For the purpose of this instruction, one unit may be taken as being equal to one sub station or 25 spans or part there of, and service connection.

Ser	Designation	Per 1 to 4 units	Extra per 4 units
1.	Charge hand	1	1
2.	Line man	1	1
3.	Assistant Tradesman	2	1

5. Electric Distribution (Internal) For the purpose of this instruction, one unit may be taken as being equal to 1000 light/fan/socket points (15 amps socket points will be taken as being equal to 10 light points).

Ser	Designation	Up to 2 units	Extra per units
1.	Charge hand	1	1
2.	Electrician	1	1
3.	Assistant Tradesman	1	1

6. Water/ Gas Supply Distribution For the purpose of these instructions, one unit may be taken as being equal to 1000 cocks/valves points. An valves (sluice/reflex etc. will be taken as being equal to 25 cocks and one gas burners chula, single or double, c/burners, tondoors etc) will be taken as being equal to 50 cocks).

Ser	Designation	Up to 2 units	Extra per units	Remarks
1.	Charge Hand	1	1	Not for 1 Unit
2.	Pipe Fitter	1	1	
3.	MPA	1	1	
4.	Assistant Tradesman	1	1*	Not per 3 or 5 unit

Ref:

- Annex –‘A’ to RI No 451/1990

RESTRICTED

7. **Steam Boilers** For the purpose of this order ‘steam boiler’ will be taken as an apparatus which raises steam at a pressure of not less than 1.20 kg per square centimeter. An apparatus which raises steam at a pressure of 1.19 kg per square centimeter or less will treat as a ‘‘Hot water’’ apparatus, for which specialist staff will not be employed.

Ser	Designation	Unit
1.	Boiler Attendant	1 per steam boiler per shift.
2.	Fire Man	1per steam boiler per shift.

8. **General**

Ser	Designation	Unit
1.	Meter Reader	1 per 500 electric/water/gas/meter or without meter consumers.
2.	Complain Receiver (C/R)	1 per shift in large station when CMES is personally satisfied that the volume of work justifies that employment. They will work 2 shifts per day only.
3.	Store man	1 where ever the CMES is personally satisfied that the volume complexity amounts of handling of the store renders one necessary.
4.	Chowkidar	1 where ever the CMES is personally satisfied that a chowkidar is necessary.
5.	Mechanical Fitter	1 per E & M Sub-division.

Note: E in C Rawalpindi letter no 4200/1/e-4 dated 8 jan. 52 addressed to list ‘b’.

9. **Lift Installation**

Ser	Designation	Lift in Operation each machine room per shift			Remarks
		01 No	02 Nos	03 Nos	
1	Lift Room Attendant	01	02	03	Extra 1 x Lift Room Attendant for 3 shifts.
2.	Lift Mechanics	*	*	*	* For (1-4) Lift machine room per station, 2 x Lift mechanics. For above 4 x Lift machine room, maximum 4 x Lift mechanics per station.
3.	Assistant Tradesman	**	**	**	** For (1-4) Lift machine room per station, 2 x Assistant Tradesman. For above 4 x Lift machine room, maximum 4 x Assistant Tradesman per station.

Ref: Above scale has been prepared in consultation with XEN E/M SM Khademul Islam, SO-II (E-3/E-4) Works Directorate & AXEN E/M Md Robiul Alam Sarkar Act SO-II E/M DW&CE (Army)

RESTRICTED

ROUTINE INSTRUCTION NO 411/2008
CARE AND MAINTENANCE OF LIFT & ELEVATOR

eZ@vrb evsjv`k tmbvewrbx, tbs ewrbx l wegvb ewrbxZ wj d#Ui e`envi e`cKv#i ep#
tctqtQ| wevfbaet`tki wevfbaet#Ui (thgb XO, SISTEK, LOTZ, MUNIC, LG,
MONITOR, DAESUNG,SCHINDLER, SIGMA, LIFTTEX BZ`w`) wj d#U
`wvZ AvtQ| D³ wj d#U wj `vct#i c#v#j Kwimix Am#eav, `vct#i #wU cwj w#Z n#PQ
Ges cieZ#Z i #lbrte#Y l cwj Pvj bvq Am#eavi Kvi#b e`envi Kvix KZE#iK Avkvbj`c
tmev c#vb m#e n#PQ bv| GgbwK Abw#t#Z `N#bv msNwUZ n#PQ| wj d#Ui Avq#vj l
tmev#gub ep#i j#i wj d#Ui wKvPw³ m#uv`b l `vct#i c#v#j KiYxq Ges i #lbrte#Y
l cwj Pvj bv m#u#K w#t`Rbvej x c#Z KiZt wbtg#eY#v Kiv n#j v t

1| wj d#Ui Gi wKvPw³ m#c#b l `vcb Kv#j KiYxq

K| bZb wj d#U `vct#i Rb` c#ve t#iYi ch#q c#Kí QK/ `vb wba#Yx cl# / c#Kí
c#j b BZ`w` `wL#j i mgq we`gub th Bgvi#Z A_ev wbg#vaxY Bgvi#Z wj d#U `vcb
Kiv nte| Zvi tj -AvDU cv# msh# K#Z nte|

L| we`gub Bgvi#Z A_ev wbg#vaxY Bgvi#Z wK ai#bi wj d#U, KZ c`v#m#vi avib
#lgZv BZ`w` wetePbv K#i wj d#U tKv#i bKkv c#qY KiZt c#Kí QK/`vb wba#Yx
cl# / c#Kí c#j Y BZ`w` #Z Avj v`v#te A# # K#Z nte|

M| mvavibZ wj d#Ui wKvPw³ m#uv`#bi c#eB wj d#U tKvi Ges tgvkb i`#gi wbg#
KvR tkl nq| wj d#Ui wKvPw³ m#cv`bKv#j msuk# wKv`vi c#Z#vb KZR miRwgtb
mvBU cw#`k# KiZt wj d#U tKvi l tgvkb i`#gi mv#_ mvg#m` ti#L bKkv c#Z K#i
msuk# KZE#i#i `v#i M#Y Ki#Z nte| velqW wKvPw³ ktZ#A# # Kiv th#Z
cv#i |

N| wj d#U `vct#i c#v#j we/Avi m#v#S-tQvU Lv#Uv mg`-KvR msuk# wKvc#Z#vb
KZR webv Li#P m#uv`b Ki#e, hv Pw³c#i#i ktZ#A# # Kiv th#Z cv#i |

O| wj d#U tKvi Aek`B Avi w# w# #v#v wbg#Z n#Z nte|

P| wj d#U tKv#i bKkv c#q#Yi mgq `iRvi l#cvbs wj d#Ui `iRvi l#cvbs Gi
mv#_ mvg#m` ti#L c#qY Ki#Z nte|

Q| wj d#U tKv#i bKkv `iRvi l#cvbs wj d#Ui t`#v#m#d#Kkb Ab#vqx #tm#Uvi
l#cvbs# Gi wetePbv bKkv c#qY Ki#Z nte|

R| wj d#U tKv#i Pit depth msuk# wj d#Ui Kwimix w#t`R Ab#niY K#i wbg#Y
Ki#Z nte|

S| wj dWkvdW Gi WvBtgbkb (Dimension) wvZew wj dtUi mvf_ mvgAm ti tL wbgY Ki tZ nte|

T| wj dWtKvtii Dcti tgnkb i tgi WvBtgbkb wj dWtKvtii mvf_ mvgAm ti tL Ki tZ nte| tgnkb i tgi tgfStZ tivc/j vBb BZ w cteki Rb cqvRbxq tnvj /w a ivLvi e e v Ki tZ nte|

U| cqvRbtefta tgnkb i tgi bxtP BYtcKkb tPviti i e e v Kiv thtZ cvti |

V| wj dU vctbi mgq BwAwbqvi -Bb-PvR A_ev Zvi cZwba (Gm Gm G B B/Gg) mveYwbK Dcw Z vKtZ nte|

W| wj dW vctbi cteWkv vi KZK AwbZ gyj vgyj wKvPv i wvbt R Abhvqx mwK AvtQ wK bv Zv wvDZ nte| cqvRtb LC, INVOICE, PAKING LIST CERTIFICATE OF ORIGINE BZ w KvMrcI cixYv- wixYv I hvPvB/evQvB Kti wvDZ nte|

X| wj dW Gi wKvPv maw bKvtj wtkl wvbt k i YvteY mgtqi cti cqvRbxq Lpiv hstki gj Zwj Kv msthvRtbi e e v ivLv thtZ cvti |

Y| wKvPv i wvbt k I qti w wci qW chS-wi tUbkbgmb mteP 10% KZbi e e v ivL tZ nte| wi tUbkbgmbi AaR (5%) I qti w wci qW AaR mgwBi ci evKx AaR (5%) I qti w wci qW tktl wKv vi tK c v b Kiv thtZ cvti |

Z| wj dtUi wKvPv wvbt k i YvteY mgqKvj ev Gi cieZxZ wvgtj mwvns Gi mgqKvtj wj dU tKvb wv t Lv w t j ev tKvb t u qvi cvU Gi e j xi cqvRb ntj wKv vi 24 Nvvi gta hveZxq Kvhpig MvbtS-wj dW Pvjy Ki tteb| Ab vq cZw tbi Rb GKw wv t cwi gvb UvKvi Ask Rwi gvb wntte Zvi cvl bv t tK KZ Ki tZ nte|

_| wj dU vcbKvix cZvrtbi Aek B Btj KwJK vj j vBtmY tevW KZK c q ABC j vBtmY vKtZ nte|

`| wj dW vctbi hveZxq Kvhpig BDti wcvb tmcw tKw EN 81 or Equivalent Abhvqx nte|

a| wKvPv i wvbt k cK-RvrvRxKiY cwi kY msvs-we wi Z kZvvtci e e v ivLv thtZ cvti |

b| wtkl aitbi wj dW Mvtyi cte wtkl A civgkvZvi civgk MvY Kiv thtZ cvti |

c| cZw wj dU mvf_ tftj UR ovej vBRvi mieivni e e v ivL tZ nte|

d| tgnkb i tgi Zvcgv v wqstbi Rb kvZvZc hst vctbi e e v ivL tZ nte|

e| wj dU i wKvPw³ cYqfYi mgq eZ@vb evRvti mnRc0c", Dbzgvfbi I meflkl
c0w³ m=ubwvj dU M0fYi e'e-v Ki tZ nte|

f| GgBGm Gi `q Rbej Movi j t q" wKvPw³ i webt`fk GgBGm Gi GKwaK
KgRZ@Kgvixt` i c0kqfbi e'e-v ivLv th tZ cvti |

Dc f i wj wLZ wbt` Rvej x Qvovl KvR i i"i cte@KvR Pj vKvj xb wj dU `vctbi/ mieivtni Rb"
m=úw`Z wKvPw³ i mvf_ mshy³ wefkl webt`fk D t j wLZ kZ@ej x h_vh_fvte Aby`Y Ki tZ
nte|

2| we`gvb wj dU mgfni i qfbte qY /cwi Pvj bvi wbt` Rvej x

B`wbs cwi j wqZ n tPQ th, Lift Room Attendant (LRA) Gi AbwfÁZv /AmZKZv/
Abpcw`wZi Kvi t b wj dU cwi Pvj bvq Rulj Zv mjo n tPQ Ges Abwf t cZ NUbvi D`me n tPQ|
mZK I KZ@`wb0vi mvf_ `wqZ; cvj b Ki t j D`mZ cwi w`wZi mjo nte bv etj cZxqgvb nq|
mjo fvte wj dU cwi Pvj bvi Rb" wbgvj wLZ wbt`fk Kv tg t b Pj vi Rb" mswkét` i c0Z wbt`R
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K| wj dU cwi Pvj bvi Rb" wbtqwrZ _vKvKvj xb LRA t` i meqjwbKfvte KZ@` vtb
Dcw`Z _vK tZ nte| tKvb Ae`v tZB cieZ@LRA bv Avmv chS-KZ@` v b Z`vM Kiv
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L| KZ@`i Z Ae`vq wj dU tKvb μw/mgm`vi mjo n t j wbt`Ri AwÁZvi Av t j v t K ` t
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M| wj dU cwi Pvj bvi `wq t Z; wbtqwrZ LRA wj dU i "tg i wqZ hšcwZ I wj dU Kv t i
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N| wki/ A`qg /Amy`f` i mrvh`Kvix e`ZxZ wj dU hvZvqvZ Kiv n tZ weiz ivL tZ
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O| wj dU Pj vKvj xb mg t q tKvb Kvi t b eÜ n t j KZ@`Kv t R wbtqwrZ LRA
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P| wj dU Kv i mveqjwbKfvte cwi `vi cwi "Qbæ ivL tZ nte|

Q| wj dU Kv t i w f Z t i agcvb bv Kivi we l q u w b w 0 Z Ki t Z nte|

R| wj dU Kv i, wj dU i "g Ges j `w0s tWvi w` t q k`vdU Gi w f Z i hv t Z cw b /Z i j
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S| wj dU Pj v bvi cte@c`v t b j t e v t W P w f Z i AbvKvswLZ tKvb e`/c0Yx thgb wUKwUwK,
gvKokv BZ`w` _vK t j Acmvi Y Ki Z t wj dU Pj v bvi Ki t Z nte|

T | wMORs ctqtU wMORs wKgz AvtQ wK bv Zv wvDZ ntZ nte |

U | cOZwU wj dU i `ctqj Ouj dUi "g GtUbWU tiwRóvi O I cwi `kO tiwRóvi msi qj b
Ki tZ nte | Ouj dUi "g GtUbWU tiwRóvi O I O cwi `kO tiwRóvi O G wj wce x Z_ w`
h_vµtg Annex - 'A' & 'B' wntmte mshp Kiv ntj v |

V | wj dUi "tg i wqjZ tiwRóvi wj mwKfvte msi qj b Ki tZ nte |

W | cOZ`K M`wi mb ntZ GKRb SSAE E/M Ges SAE E/M chqµtg
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wj dU cwi `kO Ki Zt tiwRóvi i `qj i Kite |

X | mpfvte wj dU cwi Pvj bvi wvqg t E gvtS gvtS A T `Bi ntZ OAb Re tUwbs O Gi
e`e`v Kiv nq | chqµtg cOZ`K LRA tK D³ tUwbs G AskMh tbi wvDqZv cO vb
Ki tZ nte |

Y | mieivnKvix cOZóv tbi th mKj wj dU wZb ewnb tZ e`eüZ ntPQ Zv` i wvKU
t` tK cOZ eQi Lpiv hšstki gj` Zwj Kv wRB/GwRB KZK MhY Ki tZ nte |

Z | th mKj wj dU mieivnKvix cOZóv tbi tmevi gvb mšw RbK bq tm mKj
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mieiv tni `ic t cµqvq AskMhY Ki tZ bv cv t i |

3. Routine maintenance of lift & elevator should be done as per manual laid down in manufacturer/suppliers.
4. One register will be maintained per lift where the date and nature of maintenance shall be entered.
5. Detail instruction & SOP of AHQ, E in C's Branch Works Directorate letter No - 400/01/E-4 dt 20 Nov 2006 to be followed strictly regarding procurement, operation & maintenance of lift & elevator (Which is attach as Annex-A & B to this R I)

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Ref:

1. AHQ, E in C's Branch Works Directorate Letter No - 400/01/E-4 date 20 Nov 2006.

RESTRICTED

ANNEX - B TO
RI NO - 411/2008

vj dU cwi`kØtiwRóvi - QK

μigK	Zwi L	cwi`kØKvi x Awdmɤi i bvg	cwi`kØKvi x Awdmɤi i ~ŋ i	gše"
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Ref:

1. AHQ, E in C's Branch Works Directorate Letter No - 400/01/E-4 date 20 Nov 2006.

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RESTRICTED

ROUTINE INSTRUCTION NO 412/2008
CARE, MAINTENANCE & TESTING OF
VARIOUS EQUIPMENTS

Care of Instruments and Meters

1. Only qualified instrument repairer's will be permitted to repair or adjust instruments. All meters and instruments will be sealed before issue to discourage unauthorized tampering.

Care of Fans

2. Maintenance of fans shall be carried out as and when necessary. Maintenance includes taking down fan, cleaning externally, cleaning bearing, dusting field coils and armature cleaning commutator, providing fresh clean lubricant (oil or grease as required) adjust for smooth running, fixing blades and re-fixing complete in position.

3. Table fans will be withdrawn for inspection and storage after 15th November. Table fans issued for use in garages and workshops will be fitted with a strengthened mounting consisting of a wooden base plate 18 inches square or rubber pads to which the fan pedestal, the blades case, a carrying handle and the trailing workshop cable will be separately and rigidly secured. Pedestal fans may be provided, in case necessary approval sanction is obtained from C.F.A.

Care of Sub-Station

4. Transformer, HT/LT switchgear, panel board, PFI equipment and other accessories have to be checked twice in a year. The oil level of Transformer and connected max load to be checked once in a month and record should be maintained duly signed by SDO E/M and GE/AGE. The transformer oil to be tested once in a year from a authorized testing Laboratory under local arrangement and cost will be meet from maintenance of electric supply. Proper rating fuse should be used in all control and protection devices.

Testing of Engineering plant and Equipment

5. This will follow the lines laid down in any Manufacturer's Instructions or according to general engineering practice. The following paragraph will be used as guidance.

Performance Tests

6. The result of tests carried out by Inspecting officers will be entered on the appropriate B.A.F.

Crane Tests

7. Cranes, lifts and hoists will be tested annually with a weight approximating to but more than 10% percent in excess of their maximum working load. Special attention will be paid to the proper working of break and other safety gear.

8. The testing of breaks by allowing the load to descend and suddenly checking it is liable to cause damage to gear, and is forbidden except in the case of plant intended to be so operated.

9. Wire ropes will be removed from their barrels and carefully examined for broken wires. The maximum permissible working load will be painted on the crane etc. in a prominent position thus, Load not to exceed.

Insulation Tests

10. Test of all internal electrical installations for insulation and metal sheathing and earth connection for continuity will be made annually and recorded in addition to those necessary in case of faults.

Testing and Maintenance of Instruments

11. A regular system of maintenance, inspection and test of instruments must be instituted. Generally every instrument must receive MES workshop's inspection and test every two years. These should be calibrated with standard check instruments kept in a central workshop.

12. Normal maintenance, minor adjustments and repairs will be carried out by trained/qualified instrument repairers. Instruments should, whenever possible, be used under the personal supervision of an E&M officer. Suitable padded boxes will be used for the transportation of instruments between the testing and other stations. The slightest jerk may destroy their accuracy; therefore, every care will be taken at the time of storing/handling of instruments.

Testing of Fans

13. After overhaul all fans will be tested on full load for one hour before reinstallation.

CHAPTER-IV

ROUTINE INSTRUCTION NO 413/2008 **WATER SUPPLY INSTALLATION**

Organisation of Well Boring

1. As there is no well boring equipments as well as staffs are available in the departments the work of well boring will be executed by the bonafide and expert firm Contractors.
2. Well boring rigs, tools and stores will be supplied by the Contractors as ordered by the competent authority. All well boring operations will be controlled under the direct orders of the local executive, i.e. GE/PE, AGE (Independent).
3. The GE/AGE, PE under whose jurisdiction the well boring works will be executed will depute a SDO E/M who will be responsible to him for the control, progress and completion of the work.
4. The procedure to be adopted will be as follows:
 - a. **Stage-I** The site selection is the vital points for sinking of deep tube well. The site may be selected by test boring with 38 mm or 50mm dia pipe, tapping of water and water to be tested from recognised laboratory for the quality. No of test boring for one deep tube well will be decided by the CMES. Through test boring strata to be found out and depth of the well to be fixed. Subsequently the length of strainer, blind pipe to be determined. Design of a deep tube well may be prepared on these basis.
 - b. **Stage – II Drilling of Well**
 - (1) Drilling will be done by power rig and its ancillaries equipments.
 - (2) A log book will be maintained at the site by the SDO E/M to record the daily progress and activities of the work.
 - (3) A complete record of the strata will be kept in a suitable compartmented box, which will be kept at the site.
 - (4) After the completion of the drilling, strainer will be lowered into the well. GE/PE, AGE (Independent) will ensure that the strainer is inserted at correct bearing strata. The well will be

shrouded with ungraded gravel of uniform size. GE/PE, AGE (Independent) will also check the verticality of the borehole.

(5) Well boring chart will be prepared giving the followings:

- (a) Borehole chart giving all strata thickness and particulars.
- (b) Ground level height and length of boring.
- (c) Actual depth of tube well length of strainer, blind pipe, housing & bail plug with Diameters.
- (d) Length and thickness of gravel shrouding.

c. **Stage – III Development & Test**

(1) After completion of whole work development of the well be done by surging and pumping with compressed air till the water is clear and sand free. Then pumping the well by turbine at 150% rated capacity.

(2) During the development & testing measuring of water table, yeild and draw down will be done.

(3) Finally water will be tested from the recognised laboratory for both bacteriological and chemical analysis.

This supersedes Routine Instruction No 470 of 1990.

CHAPTER-V

ROUTINE INSTRUCTION NO 414/2008 **ELECTRICAL & WATER SUPPLY AGREEMENT**

1. The term 'bulk' supply and 'Distributed supply' have no precise definition and should not be used in legal documents such as agreement. In general correspondence the following will be understood by 'Bulk' and 'Distribution' supply'.

a. **Bulk Supply** –A supply at a point or points, general of a total quantity. Considerable larger than is usually made, at any single domestic connection.

Note:

A reduced rate on account of the purchaser bearing the cost of further distribution is usual but not necessary condition, the arrangements may be one of convenience only.

b. **Distributed Supply** – A supply at one point to one purchaser of a quantity generally of domestic magnitude.

2. Distributed supplies under agreement are governed by the MES except under very exceptional circumstances, subject to the conditions laid down in the BAFW-2309, BAFW-2119, & BAFW-1774. The form can usually be amended to cover such exceptions. An agreement required with every person supplied except one paid from the Defence services estimates.

3. Supplies received by the MES from public supply agencies under the conditions applicable to the general public will normally be subject to the supply agency's printed terms for private persons amended, if necessary in minor details. No copy will specially be signed by the supply agency's representative, provided the supply is made under a license or authority held directly or indirectly from a local Government. Particulars of the licnese or authority will however be kept by the current printed terms of supply for the purpose of verifying supply agency from time to time.

4. Other supplies between the MES and other parties will normally be subject to special agreements (exceeding any supplies from or to Govt department) signed by both parties. When drafting such agreements, the supplies license should be available for comparison, particularly as regards rates. Agreement for such supplies to or by the MES will follow the wording of the model form of agreement, as given in Annexure –‘A’ to this RI. All the clause given in the model form are unlikely to be required in any particular case. Departure however from the wording and order of applicable clauses of these model forms of agreement results in delay in checking in the office of higher formations and in important points being over looked. The license or conditions laid down by the local Government, under which a supply agency operates, will be scrutinized in conjunction with drafts of all agreements in which a supply is proposed to be taken from such an agency. Agreements other than those excluded by the Regulations for the MES para 361 (ix) will be submitted by DW & CE to controller of Accounts concerned only after all action as regards technical and legal scrutiny by the competent authority has been completed.

5. This joint ownership of an installation for the supply of electricity, water or ice usually given rise to difficulties and an agreement, by which one party buys a supply from the other, in bulk is to be preferred. If however, joint ownership is necessary, the agreement should clearly specify:

- a. The proportion as the initial cost and any subsequent additions, which are to be borne by the parties.
- b. The responsibilities of the parties regarding the design, construction and operation of the whole system.
- c. The proportion of the operation costs to be borne by each party.
- d. How it is proposed to measure and control the supply to the participant in the joint scheme and in case of shortage, the proportion to be allotted to each party.

6. Plans accompanying agreement will normally not exceed twice foolscapesize in depth or width and will be completed even in accompaniment of provisional drafts. Where delineation of a boundary line is of importance, the scale must be sufficiently large to permit its exact location on the ground. Plans must be signed by both parties on original documents. Two colour sketches signed by both parties will be used,

where possible in implication of the text to define the exact extent of adjoining property of the two parties (e.g. cantonment street lights of MES poles).

7. The definition and terms in the Electricity Act and rules, as adopted by Bangladesh, will be used in electrical agreements, and the definition in the Cantonments Act in the agreement with Cantonment Authorities.

8. The liability of agreements to stamps duty under the Bangladesh stamp Act and its amount is governed by Cantonments of the various local Government to whom reference should be made.

9. No legal agreement can be entered into the departments of Govt. Memoranda of terms are drawn up between them which should follow exactly the sequence of the standard forms of agreement without any preamble. These memoranda are not signed, but copies should bear the letter number and date according to the acceptance of the competent authority on either side.

10. For convenience of others in pursuing redrafted agreements and memoranda of terms the office communicating the amended draft should under line in pencil any phrase or passage which differs from the standard form or from previous drafts.

This supersedes Routine Instruction No 495 of 1990.

MODEL FORM OF ELECTRICAL AGREEMENT

Ser	Details of Agreement	Remarks
1.	<p>(B) (D) Agreement made the ... day..... of two thousand and between the (1) (a) Company incorporated under the Indian companies Acts 1913, now adopted in Bangladesh having its principal office situated). (therin after called “the supplier” which expression shall include its successors and permitted assigns where the context so admits) (hereinafter called “the Consumer” which expression shall include his successors in office and assign where the contest so admits) of the other part:-</p> <p>(B) (D) whereas the supplier has agreed to supply and the Consumer has agreed to buy electrical energy required by the Consumer, within the area delimited by the Colour on the map hereto annexed and more particularly described in schedule ‘A’ hereto (hereinafter called “the said area”) on the terms and condition hereinafter mentioned.</p> <p>(B) (D) Now IT is HEREBY AGREED between the parties hereto as follows:-</p>	<p>This is only a draft to be used as a basis for negotiating an agreement for supply. Clauses marked (B) can be adopted for use in a bulk supply agreement and those marked (D) in a distributed supply agreement. The clauses marked (B) (D) are common to both classes of supply. The terms “bulk” and “distributed” are used for convenience in description as regards their use in legal documents see paragraph 177. Clearly all the clause marked as suitable to a particular type of agreement will not be applicabe in every individual cases. Further, it is never incumbent upon the secretary of state to initiate clauses which operate to the advantage of the other party. Such clauses are quoted solely for comparison with the other party’s drafts.</p> <p>(1) Delete if inapplicable.</p> <p>The plan and schedules should be signed by the parties.</p>

Ser	Details of Agreement	Remarks
	<p>(D)Definition:- The term ‘‘Military buildings’’ shall mean any buildings and/or premises owned hired, leased, appropriated or used by the Government of Bangladesh (Defence Department), also churches and champlin’s quarters maintained by the Defence Department from civil funds (B) (D). The term ‘‘Act’’ shall mean the Indian Electricity Act, as adopted in Bangladesh for the time being in force. (B (D) The team ‘‘Rule’’ shall mean the Indian Electricity Rules as adopted in Bangladesh for the time being in force under the Act.</p>	
2.	<p>(B)(D) Date of supply:- The supplier shall from the day of.....20..... or from such other date as shall later be mutually agreed upon not being later than theday of (hereinafter referred to as the said date) and during the continuance of this agreement supply continuously to the consumer by day and by night (up to the maximum demand set out in schedule ‘A’) and upon other conditions/set out in this agreement (including schedule ‘A’) all electrical energy for lighting, heeating, ventilation or power required by the consumer with the said area.</p>	Insert other definitions as necessary.

Ser	Details of Agreement	Remarks
3.	(D) List of houses to be supplied – The supply shall be made individually to Military buildings in the said area. A lists of such Military buildings to be supplied from the said date shall be furnished by the consumer to the supplier not less thandays before the said date. The supplier also provided a similar supply to any other military buildings in the said area within one month of receipt of notice of requirements of energy as may be given from time to time by the authorised representative of the consumer.	
4.	(B)(D) System of supply:- The supply shall be on the system (s) as set out in schedule A and shall be delivered at proper terminals in suitable taking over points therein described.	
5.	(B)(D) Variation in supply:- The variation from the declared pressure and frequency shall not exceed that permitted under the Act and Rules.	
6.	(B)(D) Responsibility as regards feeders, etc:- The suppliers shall at its own expense, provide and maintain to the satisfaction of the consumer all necessary plant, electric supply lines and apparatus on the supply side of each taking over point as set out in schedule A.	

Ser	Details of Agreement	Remarks
	<p>(D) Provided that the initial cost of the service lines from the distribution mains to the house meters, in the case of supplies to individual military buildings, shall be borne in the manner provided by Clause VI (I) (b) of the schedule to the Act, unless the said service lines are in the nature of compulsory works provided for in Clause-IV of said schedule to the Act. These service lines shall however be maintained by the supplier at its own cost and expense.</p> <p>(B)(D) The consumer shall provide all taking over point (s) to designs approved by the saupplier (Such approval not to be unreasonably withheld) and signed by the parties hereto for purpose of indentification and shall provide and maintain all necessary plant, electric supply lines and apparatus on the load side of each taking over point as set out in schedule A, to the satisfaction of the supplier. Provided always that if any damage is done to the said system of supply through proper protection devices not having been installed by the supplier, the supplier shall be responsible to the consumer for such damages.</p>	

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Ser	Details of Agreement	Remarks
	<p>(D) Any service lines, which may be required in clause 6 hereof, shall be provided and maintained by the consumer at his own cost and expense and shall remain his property.</p> <p>(B) Notwithstanding anything aforesaid the consumer shall be entitled to give a supply to any building within the said area at such rates as the consumer may decide from time to time and the supplier shall not supply electricity direct to any person for whatsoever purpose within the said area, without the previous consent in writing of the consumer.</p>	<p>In the absence of such clause and failing anything to the contrary in supplier license, the supplier can enter the area to supply any building the owner of which wishes to take a supply from them. In other words this agreement in the absence of this clause does not give the consumer a monopoly in the said area.</p> <p>3 kilowatt hour meters shall be the normal provision in taking over points where the annual registration is expected to be over 1,00,000 B. O. T units per annum. 2 Such meters shall be provided for all other bulk supplies the normal provision for distributed supplies shall be 1 meter.</p>
7.	<p>(B) (D) Registration of the supply: The supply at each taking over point shall be registered by kilowatt hour meters to a number and as set out in schedule A.</p>	<p>Relevant entries to be deleted in this and subsequent clauses, if there is no P.F. guarantee or/ and no maximum demand clause, 30 minutes is a usual period.</p>

Ser	Details of Agreement	Remarks
	<p>(B) (D) Where the metering equipment as set out in schedule A is stated to include maximum demand measurement, each meter shall embody a device for registering the maximum demand occurring in the load connected. The intergrating period of such maximum demand indicators shall unless the timing element is incorporated in the meter be controlled by time switches of a suitable type to be agreed upon by the supplier and the consumer one time switch being provided for each maximum demand indicators. The maximum demand indicators minutes so that the readings shall show the average loads during each such period.</p>	<p>The date of commencement and closing of the “Particular year” should be shown in the definitions and referred to here.</p>
<p>8.</p>	<p>(B)(D) Disputes ie: meters and supply:- Where more than meter is fitted at any taking over point and the reading of any meter (s) does not differ by more than three percent from the mean of the reading of the meters shall be accepted as correct. If the reading of any one meter at such point differrs from the mean of the reading (s) of the other (s) by more than three percent, then either party may call for an immediate test with sub-standard equipment approved by both parties of all meters at such point on a steady load. Which shall not</p>	

Ser	Details of Agreement	Remarks
	<p>demand recorded up to date in the particular year in question under the agreement. The test shall include a test of maximum demand and consumption and there after the meter or meters which have proved not to be correct, as defined in section 26 of the Act and Rules 29 –A and 29-B there under, shall be removed and a correct and at the expense of the parties here to within... .. days of pending such substitution the reading of the remaining meter (where only one) or the mean of the readings of remaining meters (where more than one) shall be accepted. Such test shall always be carried out in the presence of responsible representatives of each party. Should the test prove that meter is incorrect within the meaning of the Act and Rules, then the party responsible for its maintenance shall bear the cost of testing. Should the meter on test be found to be correct, the cost of the test shall be borne by the party calling for the test? In addition to such test, as may be called for the parties hereto, the metering equipment at the taking over points shall be tested annually under the conditions set out above and the cost of such test shall be borne equally by both parties. When settlement of any question as to the accuracy of any meter or as to the correct charge for enegy is not elsewhere provided for in the agreement, the matter shall be settled by the Electrical Inspector for the whose decision shall be final and binding on the parties.</p>	

Ser	Details of Agreement	Remarks
9.	<p>(B)</p> <p>(a) Cost and ownership of meters:-</p> <p>The metering equipment (including any maximum demand and power factor indications) shall be supplied by at the equal joint property of the parties to this agreement and one half of the cost of such equipment shall be paid by each party. On the termination of this agreement, the said metering equipment shall be sold and the proceeds divided equally between the parties. The parties to this agreement shall be jointly responsible for the cost and expense of maintenance of the metering equipment.</p> <p>(B)(D)</p> <p>(b) Sealing: All meters (including maximum demand indicators and time switches) shall each bear the respective seals of the supplier and the consumer, which seals shall be broken only in the presence of representatives of both parties.</p>	
10.	<p>(B) (D) Charges for energy:- Subject to the provision here in after mentioned, the consumer shall pay the supplier for all electrical energy (calculated aforesaid) at the rates, given in schedule A.</p>	

Ser	Details of Agreement	Remarks
11.	(B) Assessment of Maximum either Demand :-- The maximum demand recorded as aforesaid shall be taken as the sum of the maximum demands in any year of the agreement at each taking over point, irrespective of the date or time of occurrence, not being simultaneous. The maximum demand recorded as aforesaid, shall be taken as the highest individual maximum demand in any year of the agreement registered at any taking over point, plus the maximum demands registered at each of the other taking over points on the date of recording the aforesaid highest maximum demand.	Where rate for energy supplied in Subject to a maximum demand element, insert one of the following alternative methods of calculating it. Delete inapplicable system.
12.	(B) 12. Assessment of power Factor :- Arrangements will be made between the parties for determining the power factor at the taking over, points, periodically during the summer and winter in any year, in order that any adjustment in charge in respect of deviation from the tolerance allowed, may be determined and made .	

Ser	Details of Agreement	Remarks
13.	<p>(B)(D) Minimum unit Guarantee: The Consumer undertakes that the consumption of electricity for all purposes in any one year, that this agreement is in force, shall not be less than the figures set out in schedule A and that if the consumption falls below this figure, the consumer shall pay the supplier in respect of the number of units by which his consumption falls below such minimum, at the rate set out in schedule A for each unit of the difference between the figure guaranteed and his actual consumption, provided always diminution of the supplier's supply, where by the full supply agreed to be given, then the said figure guaranteed shall be proportionately reduced.</p>	<p>If fixed charges are paid for the maximum demand, a unit guarantee clause will not usually be inserted as well.</p>
14.	<p>(B)(D) Increase or decrease in rates due to variation in fuel prices, etc:- The rate (s) set out in schedule A is based on the present cost of fuel delivered into storage at the supplier's power station during any twelve months ending which has been taken at Tk per ton if such rate (s) shall be increased or decreased for a period exceeding a month, then for each complete Tk 1 (Taka one) per ton increase or decrease in the average cost of the said fuel to the supplier above or below Tk..... (Tk..... per ton so delivered, the rates set out schedule A shall be increased or decreased by..... or B. O. T</p>	

Ser	Details of Agreement	Remarks
	<p>unit. Provided always that no change shall be made in the first two years of this contract. The average cost per ton of the said fuel to the supplier as aforesaid, for the purpose of this clause be calculated by taking the total price paid by the supplier for the said fuel delivered to the supplier's said power station during the previous twelve months ending .. adding there to the value of the said fuel in store at the beginning of such twelve months (vize. its cost price delivered at the said power station) and deducting there from the value of such fuel in store at the end of such twelve months deducting also the cost of such fuel issued from the said power station during the said period of twelve months, for purposes other than those incidental to the generation of electricity by the supplier and then dividing the net result by the total number of tons of such fuel used for the purpose of this clause shall mean fuel of calorific value of (i) B. Th. U. per pound avoirdupois and if lthe calorific value differs from this figure by more than 500 B. Th. U. per pound, the cost for the purposes of this clause shall be the cost, as ascertained above, multiplied by (i) and divided by the actual calorific value tests by</p>	<p>(i) Insert the normal calorific value of the fuel obtainable in the station in question, as mutually agreed upon by both parties.</p>

Ser	Details of Agreement	Remarks
	<p>an independent authority to be mutually agreed upon by the parties here to, shall be made every six months on samples of fuel taken from different parts of the suppliers storage at and the average of the calorific values so found will be taken as the calorific value of the fuel consumed. For the purpose of checking the aforesaid price of fuel, the suppliers fuel Account shall be opened to inspection by the consumer after twenty four hours written notice. There shall be an adjustment on the(date) in each year of the amount paid for the total number of electrical units supplied to the consumer, corresponding to the increase or decrease in price calculated on the basis as set out above. The consumer may, if he so desires, demand the production of a certificate from the registered firm of accountants and auditors employed by the supplier, certifying the price of fuel per ton as calculated above. If there is any dispute as to the meaning or effect of this clause and the amount payable there under, the same shall be settled by theand his decision shall be final.</p>	
15.	(B)(D) Submission of Bills: The said meters shall be read by responsible officials of each party	

Ser	Details of Agreement	Remarks
	<p>monthly at a time and date to be mutually, at a time and date to be mutually agreed upon, and the consumer shall pay monthly to the supplier (Within.....days of the submission of the bill) for all electrical energy shown as consumed as aforesaid also 1/12th of the sum due on account of maximum demand, calculated on the highest demand to date. The latter amounts shall be subject to adjustment at the end of each year of the agreement, when any deficiencies on account of payments made in months previous to that, in which the highest demand was recorded, shall be paid by the consumer to the supplier.</p>	
16.	<p>(B)(D) Inspection of Books:- The suppliers books shall be open to inspection and examination to the authorised representative of the consumer for the purpose of verifying charges under these headings, on the supplier receiving a notice in writing 24 hours before such inspection and examination is required.</p>	
17.	<p>(B)(D) Inspection of plant: The authorised representative of the consumer shall have the right at reasonable times to inspect the working or the supplier's plant.</p>	

Ser	Details of Agreement	Remarks
18.	(B)(D) Use of aerial line structures: If the consumer shall desire to use any poles or structures, erected, for carrying the supplier's low or medium pressure aerial lines for the purpose of affixing to them any lights or wires, he shall be at liberty to do so on paying to the supplier such amount as may be agreed or failing agreement as shall be fixed as a fair rental by arbitration as hereinafter provided for.	
19.	(B)(D) Period of agreement: This agreement (subject to provisions of the next clause 20 thereof) is entered into for a period of years and if not then terminated as hereinafter provided, it shall remain in force thereafter from year to year, untill it shall be determined at any time be either party giving to the other party.....calender months notice in writing by registered post of their desire to determine it. If either party desires to terminate this agreement at the expiration of the original period ofyears, notice of such desire shall be given at least Calender months before the expiration of the said period.	(i) 5 years is a normal period. (ii) 6 months is a normal period. (iii) 12 months is a usual period.

Ser	Details of Agreement	Remarks
20.	(B)(D) Summary termination: If the supplier shall not by the said date commence to supply electrical energy in accordance with the provisions hereof and to the full extent agreed, or being a limited company shall at any time during the continuance of this agreement be wound up (save for the purpose of reconstruction) or shall not in all things perform and observe the provisions and conditions of this agreement, then in such case the consumer shall (without prejudice to his other rights including that of taking or arranging for the supply of electrical energy from elsewhere at the risk and expense of the supplier) be entitled to terminate this agreement upon giving the supplier three calendar month previous notice in writing by registered post to its registered office.	
21.	(B)(D) List of property: A list of the property, of whatever nature in or attached to the taking over points, referred to in schedules A and consumer's wires or lights on supplier's aerial line structures, shall be entered in schedule B annexed here to under the following three heads:-	

Ser	Details of Agreement	Remarks
	<p>(a) Suppluers property (b) Consumer's property (c) Joint-owned property</p> <p>Copies of schedule B shall be retained by theon behalf of the supplier and by theon behalf of the consumer and copies shall also be hung in each indoor's taking over point. All copies shall be signed by the authorised representatives of both parties and amended from time to time as may be necessary.</p>	
22.	<p>(B) Removal of gear: On the termination of this agreement the supplier shall, within such time as the consumer shall specify, remove any of its plant of apparatus listed in schedule B from within or from the neighbourhood of the consumer's structures at the taking over points and also any plant, electric supply lines or apparatus, which the consumer had, by sanction in writing, agreed to the supplier placing or premises of the consumer and shall make good all damages done thereby, failing which the consumer may carry out the work and recover the cost from the supplier.</p>	

Ser	Details of Agreement	Remarks
23.	<p>(B)(D) Increase of maximum demand figure: The maximum demand of the supply to be consumer under these presents shall not, during the continuance of this agreement, exceed the figure given in schedule A (herein-after called the first limit) unless the consumer shall upon giving six calender months notice in writing, have demanded an increased supply, which increase supply shall be in resonable excess of the first limit of such other limit, as may from time to time have been substituted there for under the provisions of this clause. On receipt of this notice, the supplier shall forthwith at his own cost and expense, make all agreements and supervisions as may be necessary to ensure such supply being given as the consumer shall be entitled to demand on the expiration of this notice.</p>	
24.	<p>(B)(D) Consumer not to take supply from other source: The consumer shall not (except on failure of supply by the supplier for any cause) generate himselft or purchase a supply of electrical energy, for use in the said area during the period of this agreement, from any person or body corporate or incorporate</p>	

Ser	Details of Agreement	Remarks
	<p>excepting the supplier, so long as the supplier observes and performs its obligations hereunder. Provided always that in the event of an emergency arising, where by the consumer requires additional electrical energy, which the supplier for any reason is unable or fails to supply as required (as to which emergency the decision of the Commander.....District shall be conclusive and binding, the Consumer shall be at livery to make his own arrangements for the supply of such additional electrical energy.</p>	
25.	<p>(B)(D) Authorised representative to be dealt with. The supplier in connection with this agreement shall deal only with the.....or such other officers, as the consumer may from time to time appoint and any notice by the supplier to the consumer shall be deemed to be duly given, if addressed in writing to the before mentioned officer and left at or sent by registered post to his office situated at ... or at the place where office may for the time being be situated. Any notice by the consumer to the supplier shall be deemed to be duly given, if addressed in writing to the</p>	

Ser	Details of Agreement	Remarks
	supplier and left at or sent by registered post to the office of the supplier situated atNotice of termination as required by clauses 19 and 20 of this agreement, on behalf of the consumer, shall only be given to the supplier by the Joint Secretary, Min of Def Government of the people's Republic of Bangladesh	
26.	(B)(D) Assignment: The supplier shall not assign or underlet this contract without the previous written consent of the consumer.	
27.	(B)(D) Indian Electricity Act, as adopted in Bangladesh to apply :- In all matters, not here in specially provided for the provisions of act and the supplier's license governing the relations between the supplier and the consumer shall be deemed to be part of this agreement and shall govern the parties here to so far as applicable.	
28.	(B)(D) Arbitration: Should any difference arise between the supplier and the consumer (the settlement of which is not here in before provided for) as to the interpretation of any of the provisions of this agreement or anything otherwise however arising here under such difference shall be referred to the arbitration of an arbitrator to be agreed upon	(i) Give full paraticulars in licence. (ii) The supplier must sign in accordance with its constructions.

Ser	Details of Agreement	Remarks
	<p>by the supplier and the consumer and in default of agreement to an arbitrator to be appointed by the Joint Secretary, Min of Def, Government of Bangladesh whose decision shall be final and the terms of the Peoples Republic of Bangladesh Arbitration Act, for the time being in force shall apply to any such reference. In witness where of the Common seal of the above named *.....has been here into affixed and the Joint Secretary, Min of Def, Govt of Bangladesh for and on behalf of President of the Poeples Republic of Bangladesh has caused these presents to be duly executed the day and the year first above written. Joint Secretary to the Government of Bangladesh by the order and direction of the President of Bangladesh in presence of ,</p>	<p>Witness..... Designation..... THE COMMON SEAL OF THE .. has been hereinto affixed in the Presence of Witness</p> <p>SIGNED BY</p>

Ref:

1. Appendix – A to RI 495 of 1990.

ROUTINE INSTRUCTION NO 415/2008
SAFETY & MISCELLANEOUS ORDERS

Sanction before Taking Plant into Use

1. No plant newly, erected or on a new site will be started or taken into use without the prior sanction of the DW & CE in the case of main Generating and Pumping sets and the C'sMES in the case of other plant. Test of installation will be carried out by E/M officer who will be detailed by DW & CE/CMES to inspect and test the plant before regular commission.

Transfer of E&M Plant

2. When E & M plant is transferred from one area to another, it will first be opened up by the area from which it is being transferred and examined. A report will be made as to its conditions and the amount of work and spares, which it is necessary to put into it before re-erection, in order to ensure the normal expectation of further life with ordinary care. The report will be sent to the area to which the plant is being sent, if considered desirable, the presence of an E/M officer from this latter command at the examination may be applied for.

Road Machinery SAE, E/M

3. The road machinery and other similar tools and plant machinery in a division will be placed in charge of an experienced SAE, E/M called the Road Machinery SAE. The appointment is not necessarily a full time one. It will be his duty to inspect periodically the machinery while at work or on the road and see that they are being properly handled and looked after by the crew. He will see that the proper washouts are being arranged and recorded in log books and he will carry out all running repairs and adjustment which the driver cannot under take. He will immediately report to the GE/AGE under whom the machinery is working, if he considers that it is unsafe for further work or requires immediate heavy repair. SDO E/M, SDO I/C work will take all such machinery on his charge from the day it leaves the yard until the day of its return and he will be responsible for:

- a. Paying the crew
- b. Providing fuel, Lubricants and running stores.

- c. Seeing that days off or allowed for washouts, running repairs, and that facilities are given for the Road SAE E/M to carry out his inspections.
- d. Seeing that the logbook is properly kept up. When the plant returns to the T& P yard, it becomes the entire responsibility of the officer in charge of the T& P yard and any necessary repair should be carried out as early as possible.
- e. Under no circumstances will the payment of crews be delayed owing to disputes as regards allocation.

Machinery Transport

4. The MES are authorised by Government of the People's Republic of Bangladesh to Maintain in peace certain mechanical transport. The scale is published by respective HQ from time to time. The MT vehicles on charge of the MES will be considered as Military transport vehicles for registration and are exempted from local civil registration. The use of vehicles held on charge by MES will be controlled by MES (para 11 of SBAO 8/B/78).

The following documents will maintained:

- a. VDRA-BAFZ-2212
- b. Duty slip-BAFZ-2007
- c. Drivers car Diary-BAFZ-2209
- d. Vehicle log book-BAFZ-2197
- e. Vehicle Register-BAFZ-2186
- f. Monthly Vehicle Return-BAFZ-3020

Instructions for the maintenance of record and use of MT published in Bangladesh Army Order from time to time shall be strictly adhered to. Orders for Identification numbers of such vehicles are given in RI No 404 will be reviewed.

Factories Act

5. The factories Act (as Adopted by Bangladesh) and any specifications thereof notified by Govt. are binding on the MES. In accordance with this Act all workshops, power stations, etc come within the purview of the Act if:

- a. Mechanical and electrical power is used and
- b. At least 20 workers are employed.

In cases where these conditions are fulfilled, it is the duty of the officer-in-charge of the installation to notify the factory inspector for the area. In cases of doubt, a reference should be made to the Factory inspector. The orders in the Act regarding protection of machinery are binding on the MES and will be adhered to when designing installations.

6. Protective clothing in the way of over-all-mazari will be provided for all persons, whose duties necessitate their working in close proximity to moving machinery or in other positions where the wearing of loose clothing is dangerous. The CMES will decide that persons should be provided with protective clothing. The scale will be two pairs of shorts per man with 5 percent spare.

Electricity Act

7. The electricity Act (1910) and rules as adopted by the Bangladesh under are binding on all MES installation to the extent that the Act and Rules are binding on the MES. MES installations must, therefore, comply with the Act and Rules as regards their regulations and operation in relation to the protection of persons and property.

8. The Electricity Act and Rules (as adopted by Bangladesh) also to be considered as binding in all matters pertaining to the regularity and sufficiency of supply subject only to Military exigency. Officers will invariably be guided there by.

Boilers Act

9. The Boilers Act, the Boiler Regulations, as adopted by Bangladesh and any amplification thereof notified by local Govt. are binding on the MES, local MES officers are responsible that all steam pipe ranges and boilers under their control are registered before being taken into use and that the annual inspection as laid down in the Act are carried out. From the definition of boiler as given in the Act, it will be seen that low-pressure boilers, cooking apparatus and such like articles are excluded.

Workman's Compensation Act

10. The workmen's compensation Act applies to MES employees. A return will be submitted by C'sMES in respect of all MES employees, who suffer an accident or contract for which compensation is payable, and who are 'Workmen' under the provision of this Act.

11. A copy each of the Acts and Regulations mentioned in paragraph 7 to 10 will be maintained by every GE/AGE.

Accident & Breakdowns

12. The first report on any accident of a serious nature involving loss to human being will henceforth be made to the E in C direct endorsing copies to CMES/DW & CE concerned in order to obviate delay.

13. In case of accidents where in a Govt. vehicle is involved, causing the death of civilian employed in MES, a report should also be made to civil police.

Handling of Dangerous Liquids and Gases

14. Keep in a cool dry place away from the direct heat of sun and steam pipes and boilers. All concerned will be instructed in the storage and handling of gas cylinders, acid ammonia containers, with particular respect to:

a. The coloured panels distinguishing different contents of cylinders (See B.S. specifications No 342, 1932 extracted as Annex 'A').

b. The precautions to be taken in opening and connection fresh cylinder (See MES Hand Book Volume V) for chlorine, similar remarks apply to other gases.

(1) Before connecting a fresh cylinder, it should be taken into the open and the covering cap removed. The cylinder valve should be opened before unscrewing the hexagon blank nut sealing the valve outlet to ensure that the valve is working smoothly, If there is any tendency for the valve to stick, it should be tapped smartly with a piece of hard wood and a hammer. Lubricants, kerosene oil and the like must not be applied. Do not use great force on the spanner.

(2) When it has been assumed that the valve spindle is working smoothly, care should be taken to see that the gland is sufficiently tight to prevent the escape of gas. The valve should then be closed and the blank hexagon nut removed. It is always admissible to blow off the cylinders for a few seconds into the open air before connecting them to the control apparatus, in order

to clear away slight impurities. The connector valve of the dosing apparatus screwed directly on the cylinder valve outlet a copper and asbestos, lead or dermatine washer being to make a tight joint.

(3) It is important that the cylinder valve be closed when the cylinder is empty, otherwise moisture from the atmosphere may enter and would rapidly cause corrosion of the internal faces of the cylinder. The cylinder should then be disconnected and the blank nut and protecting cap replaced.

c. Ammonia containers should be placed in water below 60⁰ F or into ice for one hour immediately before opening. They will be held in open air, with the necks away from the operator and the bottles covered with thick cloths while the stoppers are being loosened. They will be kept in cool stores away from acid.

d. The precautions to be taken in entering a room to stop a leak of gas. (The local medical authorities will be asked to advice in the particular circumstances).

First Aid

15. Boxes containing dressings, etc as the local authorities advise will be displayed in prominent position in each installation and selected personnel instructed in their use. Whenever earth moving machinery or well boring plant is detailed for work at place, where no medical facilities are readily available a small first aid box with medicines, bandages and cotton will be handed over to the plant operator along with the tool kit.

Protection of Eyesight

16. Eye masks should be provided for the use of men working at grinding/welding machines. Eye masks fitted with proper protective glass, which will not transmit the ultra-violet rays, must be provided for Acetylene and electric welders. All men whose duties may bring them into the welding room must be warned against the danger of looking at the flame except through protective glass.

Protection against Accidental Contact by Persons with Aerial

17. Bare aerial lines will be rendered inaccessible to any persons without the use of a ladder or other special appliances. In the case of conductors crossing any portion of a building or structure, a minimum vertical clearance of 5 meter and minimum lateral clearance of 2 meter is required. Where a service line terminates at a building or structure any live bare portion of the aerial line will be at least 2 meter from the building and 5 meter above ground.

Protection of Persons Working on Electrical Plant and Distribution System

18. No work will be carried out on any aerial lines, cable or apparatus until the workers in charge has personally ensured that:

- a. The plant is completely disconnected from the main supply.
- b. No workers are in loose clothing.
- c. Ladders used are sound and of good quality
- d. All E/M personnel who are trained and are working at site will wear an uniform which will distinguish them from other MES personnel. The design and colour of the uniform will be selected by the respective CMES on approval from DW&CEs. Only two sets of uniform will provided to each personnel in a year and their use shall be restricted for duty time only. Expenditure incurred will be debited to the maintenance of external services.

19. In the case of HT and EHT lines, cables or apparatus, the workers in charge will further safeguard the workers by short circuiting and earthing all conductors before commencing work. To enable this to be done on any section of H T and E H T lines in any installation a notice will normally be hung ready for use near the switch and smooth energising the plant will under no circumstances be closed without further investigation.

20. No worker will ever work on any exposed HT or EHT plant, on which men are working, is not energised.

21. In every case suitable precautions will be taken to ensure that plant, on which men working are not energised, maliciously or by unauthorised

persons, either by looking, guarding or sitting them, where unauthorised persons can have no access.

22. The workman in charge of a party will personally ensure that all men and gear are clear of plant, before he takes steps to have it re-energised.

23. Where several parties of workman are employed on a plant, or the plant can be energised from more than one point, all orders for re-energisation will be given by one appointed person after all parties have reported conclusion of the work to him. Each party leader will render a certificate that the lines are clear of all workmen.

Protection of Electrical Apparatus

24. Adequate safety devices in connection with power consuming apparatus will always be provided. This applies particularly to items such as electric water heaters, boiler, sterilisers, etc where it is desirable to ensure disconnection of the circuit in the event of failure of the water supply. Modern apparatus which embodies automatic devices for this purpose is available from the trade and should be used whenever possible.

Protection Against Exhaust Gas Poisoning

25. In all cases where I. C. engine are to be run temporarily or permanently in an enclosed space, e. g. in a building, down a well etc, adequate arrangement must be made for the exhaust gases to be led outside.

Fire Protection

26. The following precautions will be taken in power stations and substations to minimise the risk of fire and of damage in the event of fire:

- a. Some means of lighting engine and boiler rooms, other than electric lamps fed from the station bus bars, will always be actually in use at night. Preferably, re-chargeable lamps should be used.
- b. Strict instructions will be issued against the spilling of oil on the floor. Trip trays will be provided and any oil spill will be wiped at once.

- c. Service fuel tanks will be permanently fixed in a safe position (e.g. carried by iron brackets fixed to the wall) and provided with covers.
- d. Particular attention will be paid to the safe storage of any small quantities of inflammable stores, such as petrol, kerosene, carbide etc. when drawn for use in installations and workshops. They will not be stored therein but will be kept locked in a separate storeroom or receptacle outside, to which only responsible subordinates will have access.
- e. Buckets containing sand or water will be provided in each engine room and clearly marked 'Fire'. This will not be used for any purpose other than for extinguishing a fire.
- f. Fire extinguishers designed for use on fires on live electrical plant will be installed in all generator rooms, sub-station and electric driven pumping station. Fires in other small electrical gear will be dealt with sand.
- g. Water will never be used on oil, petrol or fires in live electrical gear.

Electric Shock

27. All personnel will be instructed in the methods of dealing with people suffering from shock and the SAE, E/M of the installation is responsible that this instruction is carried out. The assistance of the medical authorities in giving such instructions should be requested.

Lightning Protection

28. The buildings, for which lightning protection is authorised are given in Barrack synopsis. Before however, any design or estimate for a protective installation is made, the orders of the local Commander will be obtained as to what value is attached to the preservation of the particular structure, and to the danger indirectly to life or other property as a result of explosion, It must be made clear that absolute protection is normally unattainable except at prohibitive cost, and that at best only an approximate estimate can be given of the degree of protection obtainable at a given cost. Instruction for the design, maintenance and testing of lightning protective equipment are given in British standard Code of Practice 326. 101 (1948)-protection of structure against lightning and

E in C T I No 47. Responsibility for maintenance will on no account be mixed from that for test (see para 28 of RI No 404).

Installation Standing Orders

29. Every CMES will issue to all concerned such standing orders as may be necessary regarding the E&M installations in their areas. The GE will ensure that every SDO E&M, or SAE, E/M on arrival is given a copy of the local standing orders.

30. In addition to such orders as may be required by local conditions standing orders will include such of the following as are applicable:-

- a. Action to be taken regarding routine examination.
- b. Action to be taken regarding periodical consumption tests.
- c. Any special instruction for the measurement etc of fuels.
- d. Responsibility for and method of maintaining log sheet, log books and records.
- e. Safety regulations.
- f. Any special instruction for the care of plant and responsibility for the safe custody of different stores.
- g. The pasting of fire orders.
- h. Responsibility for cleanliness of plant and building.
- j. Reference to all important circulars and circular letters and Tech Instructions regarding E&M installations issued by the E in C or DW &CE.
- k. A list of the places, at which extracts from the above, will be posted and whether in Bangla or in the local vernacular.

Spare Parts - Installation

31. Spares for unit repairs, including those for auxiliaries and distribution system, for two years, normal working plus other as experience dictates in order to maintain continuity of supply.

Meters

32. 3 percent of each size used for house service plus one of each size main meters.

Internal Wiring

- a. Ceiling - 4 percent of each type installed.
- b. Table fans - 5 percent of each type in use.
- c. Other items - Suitable requirements.

Items (a), (b) and (c) will enter into normal circulation so that an equal number may be withdrawn for repair and shall be taken 'as spare' after repair. For repair/replacement purposes spare fans shall be counted in quantity and not by their identity Nos.

Accounting for

33. Instructions as regards spares of cost installations are given in the flyleaf of plant Record Book (BAFW-2208). The complete holdings of fans and meters will be entered individually in Fan and Meter Register (BAFW-2181).

Authorised Spare Parts List

34. CMES will approve lists of authorised spare parts for unit repairs to be kept for each installation. The monthly certificate is required from SDO in charge of an installation, relating to these lists.

35. A notice to the effect, that Admission except of duty is prohibited, will be exhibited in English, Bengali on near the gates of all MES installation, workshops etc.

36. The following posters will be displayed on the walls of all installations and workshops to which they are applicable:

- a. BAFW-1791 care and Working of MES plant and Machinery.
- b. BAFW-1797 care and working of MES Boiler.
- c. Copy of installation standing orders.
- d. Fire orders.
- e. Routine Maintenance Chart.
- f. Instructions regarding treatment of electric shock in English and Benglai, obtainable on payment from the local elctrical inspector to Govt.
- g. Maker's instructions regarding operation and maintenance.
- h. Inventory of fittings and lists of plant equipment (paragraph 15 of RI No 404).

This supersedes Routine Instruction No 407 of 1990

IDENTIFICATION COLOURS FOR GAS CYLINDERS

Ser	Gas Name	Symbol	Ground Colour of Cylinder	Colour of bands
(a)	(b)	(c)	(d)	(e)
1.	Acetylene	C ₂ H ₂	Maroon	None
2.	Ammonia	NH ₃	Black	Red & Yellow
3.	Argon	Ar	Blue	None
4.	Carbon Dioxide for temperate use	CO ₂	Black	None
5.	-do- for tropical and marine use	-	Black	White or alluminium paint
6.	Carbon Monoxide	CO	RED	Yellow
7.	Chlorine	Cl	Yellow	None
8.	-do- Cylinders fitted with internal air pipes	-	Yellow	Black
9.	Coal Gas	-	Red	None
10.	Ethyl Chloride. inflammable	C ₂ H ₅ Cl	Grey	Red
11.	-do- non-inflammable	-	Grey	None
12.	Ethylene	C ₂ H ₄	Mauve	Red
13.	Freon	CCl ₂ F ₂	Partly coloured Bottom and Grey neck and mauve	-
14.	Helium	He	Medium Brown	None
15.	Hydro Cyanic Acid	-	Blue	Yellow
16.	Hydrogen	H	Red	None
17.	Methane	CH ₄	Red	None
18.	Methyl Bromide	CH ₃ Br	Blue	Black
19.	Methyl Chloride, inflammable	CH ₃ Cl	Green	Red
20.	-do- Non flammable	-	Green	None
21.	Neon	Ne	Medium Brown	Black
22.	Nitrogen	N	Grey	Black
23.	Oxygen	O	Black	None
24.	Phosgene	COCl ₂	Black	Blue & Yellow
25.	Sulphur Dioxide	SO ₂	Green	Yellow

ROUTINE INSTRUCTION NO 416/2008
POL INSTALLATION
BULK PETROL INSTALLATION-SAFETY

1. All tools and dip rods employed with Bulk petrol Installations must be made of Non-ferrous metal. Tools or dip rod of iron or steel will under no-circumstances be used and where existing in Installations they will immediately be withdrawn and replaced with the non-ferrous types.

Safety Distances

2. The following minimum safety distances and General Installations shall be observed when planning installation of Bulk petrol installations:

a. Between two tanks, exceeding 45000-liter capacity each.

- | | |
|----------------------|----------|
| (1) If over – ground | 30 Metre |
| (2) if under ground | 15 Metre |

b. If a number of 45000 liters capacities of smaller tanks are to be installed, they may be formed into a number of batteries, each composed of two tanks.

- | | |
|----------------------------------|----------|
| (1) Between two tanks of battery | 6 Metre |
| (2) Between two batteries | 30 Metre |

3. Between tank and pump house

- | | |
|--------------------|----------|
| a. If over ground | 30 Metre |
| b. If under ground | 15 Metre |

Note: If any one of these tanks or pump house is over ground and the rest under ground, whole installation, for the purpose of safety distance, will be reckoned as a over ground.

4. Between fence and tank. 45 Metre

5. Between fence and pump house, lorry filling point, drum and can filling and storage shed or railway tank wagon decanting point. 30 Metre

6. Between tank and public road 45 Metre

7. Between tank and internal road (Within the premises of the installation). 30 Metre

RESTRICTED

- | | |
|--|-----------|
| 8. Between pump house and lorry filling point (if lorry filling is on the pump house side away from the tank). | 15 Metre |
| 9. Between pump house and lorry filling points (if lorry filling is not the tank side away from the pump house). | 30 Metre |
| 10. Between pump house and internal road. | 15 Metre |
| 11. Between two lorry filling points | 9 Metre |
| 12. Between cubical (containing electric switch gear for main control and pump house). | 6 Metre |
| 13. Between cubical (containing electric switch gear for main control and tank). (See General Instructions). | 6 Metre |
| 14. Between railway tank, wagon decanting point and storage tank, pump house, or internal road. | 30 Metre |
| 15. Between two-railway wagons decanting points. | 9 Metre |
| 16. Between tank and any other building not forming part of the installation (in places other than air fields). | 45 Metre |
| 17. Between drum and can filling or storage shed and tank. | 30 Metre |
| 18. Between drum and can filling or storage shed and pump house, lorry filling points. | 30 Metre |
| 19. Between fence of two separate bulk petrol installation exceeding 2,70,000 liter each. | 90 Metre |
| 20. Between fence and nearest hanger | 180 Metre |
| 21. Between tank and hard standing or any air field building (not forming part of the petrol installation). | 135 Metre |
| 22. Between fences nearest point of runway. | 405 Metre |

Ref:

1. Technical Instructions No 27/1967 E in C Branch GHQ, Rawalpindi.

General Instructions - for Bulk Petrol Installation

1. Internal wiring in all buildings of bulk petrol installation must be done in solid drawn conduit. The lay out of wiring should be such as to require minimum length of wiring in tank chambers, pump houses and drum, can filling and storage sheds.
2. All electric meters, distribution boards, switch, fuses, sockets and plugs shall be placed out side to buildings.
3. The number of light points installed on tank chambers, pump houses and drum and can filling and storage sheds shall be minimum in number, necessary for the work.
4. All electric fitting shall be of flameproof type, satisfying the requirements of the BSS no 229 and all metallic frames shall be effectively earthed.
5. All bulk head fitting shall be fixed normally 3.60 meter from the floor level, but in no case less than 2.40 meter.
6. All joints of the bulk head fittings and switches, etc must always be kept air tight. Broken glass must be replaced immediately.
7. The use of hand lamps is to be strictly limited to special cases, where there use is unavoidable, where lever fixed lights should be preferred. No matter how well made and protected the hand lamps may be, the outer glass cover is not immune from breakage under rough use and the flexible cable is also liable to damage, or to be torn out and may consequently result in producing a spark.
8. No electric transmission lines shall pass within 6 meter of any buildings of the installation 24 meter of bulk storage tanks, and 15 meter of lorry filling points, drum and can filling and storage shed and railway tank wagon decating points, unless the transmission wires consist of insulated cables and are enclosed in gas tight metallic covering, switch shall be electrically and mechanically continuous throughout and effectively earthed out side the buildings.

9. All wrenches, spanners and other tools used in this installation must be made of non-ferrous metal and not of steel or iron.

10. All pumping sets must be self priming. If electric, they must also be AC and of flame proof type conforming to BSS No 229, when for under ground. No engine driven or DC sets will be used for under ground pump houses. If DC or engine driven sets are used, their pump houses must be located over ground with a partition wall erected between the driving and the driven parts of the pumping sets. Plenty of cross ventilation should be allowed for all such pump houses.

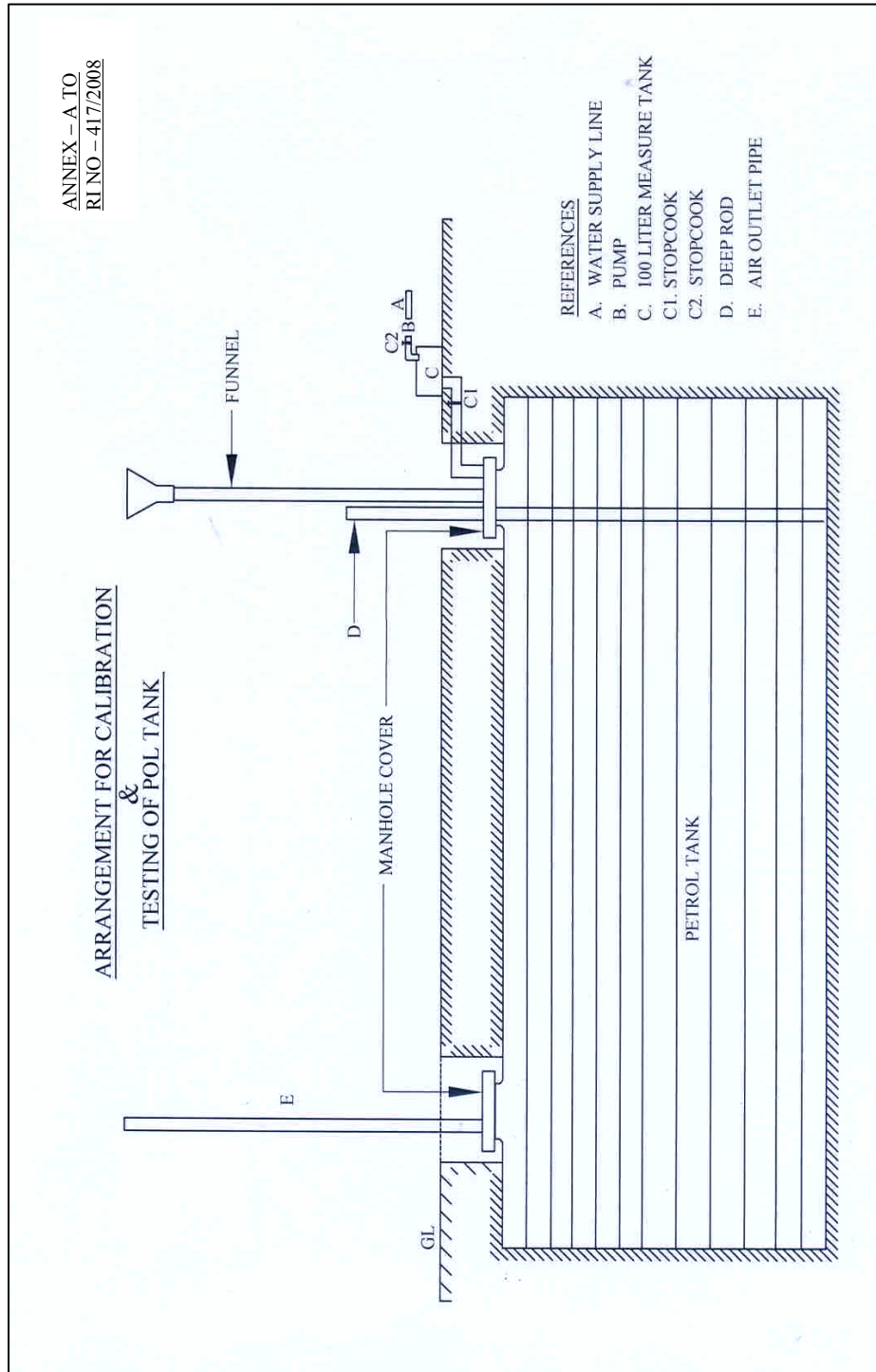
This supersedes Routine Instruction No 430 & 431 of 1990.

ROUTINE INSTRUCTION NO 417/2008
BULK PETROL INSTALLATION-METHOD OF CALIBRATION

1. A 100 liter tank shown in Annex –A serve as a measure is to be obtained and the level denoting 100 liter is to be correctly marked therein. In addition, one small pump and necessary pipe line for connections are also to be made available.

2. The test will be proceeded with as follows:
 - a. The 100 liter tank “C” would be filled with water from water supply line “A”.
 - b. If necessary, a pump can be inserted at “B” for boosting up.
 - c. Provide a stopcock at “C1” at the discharge end of 100 liter tank.
 - d. Provide a stopcock at “C2” to control the inflow of water into the 100 liter tank.
 - e. Fill tank “C” with 100 liter, Then cut off the supply.
 - f. Open stopcock “C1” and pass water on to the main petrol storage tank, under calibration.
 - g. Insert dip rod and mark with indelible or permanent groove; keep a record in your notebook also.
 - h. Continue repeating until the petrol storage tank is full and the dip rod fully graded.
 - j. Reverse pump “B” and empty out the tank.

This supersedes Routine Instruction No 432 of 1990



ANNEX - A TO
RI NO - 417/2008

Ref: Technical Instruction No 26 of 1967 E in C's Branch GHQ, Rawalpindi

ROUTINE INSTRUCTION NO 418/2008
BULK PETROL INSTALLATIONS PERIODICAL
TEST FOR LEAKAGES

1. Each and every bulk petrol installation will be inspected and tested for leakage once in every two years or earlier, if circumstances so demand. These tests will be carried out as follows:

a. **Under Ground Tank.** Water testing is adopted to check the soundness of petrol tanks and connected pipes lines both buried and exposed. The test pressure for all types of tanks is 3 riser pipe fitted above the tanks. It is essential to see that all paint glue compound is removed from the seems of the tank internally, before water testing is resorted to. The seems must be left unpainted for the duration of the test. Care should be taken to ensure that on air locks take place while tank are being filled with water. After this is done, riser pipes up to 3 meter above the highest points of the tanks should be fitted on the manhole covers and filled with water. The tanks retention of water level of its drop in the riser pipes will indicate the soundless or other wise of the tanks.

b. **Over Ground Tanks.** These can be first visually inspected and if pressure test are considered necessary, the same procedure as adopted.

c. **Pipe Lines.** Pressure test should be applied by sealing off at each end of the pipeline and inserting a hand pump with a pressure gauge attached to it. Pressure should be pumped up to 3.50 Kg per sq. centimeter and retained on the gauges for at least one hour without drop. If the test fails to produce these results, the pipeline should be opened up to trace defective pipe for replacement.

2. Repainting as a normal sequence re-painting must follow the tests.

This supersedes Routine Instruction No 433 of 1990.

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**MILITARY ENGINEER SERVICES
BANGLADESH ARMED FORCES**



PROVISIONAL
COMPENDIUM
OF
MES ROUTINE INSTRUCTIONS-2008

PART – V
BUDGET

PUBLISHED BY: AHQ, E IN C'S BR, WKS DTE, DHAKA CANTT.

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CHAPTER-I**ROUTINE INSTRUCTION NO 501/2008**
BUDGET CLASSIFICATION
(CODE HEADS FOR MES)

1. **Military Works (Any amount)**. The Expenditure incurred and Revenue organized by the MES is classified as under:

- a. Organizational Code: 1900-MOD
- b. Operational Units & Code Nos. (Level-2 & Level-3 Code Nos)

- (1) Army Works :-/1931/0120/.....
- (2) Naval Works :-/1933/0100/.....
- (3) Air Force Works :-/1934/0100/.....
- (4) Inter Services Organizations Works :-
 - (a) DGFI –/1935/0010/.....
 - (b) DGDP –/1935/0020/.....
 - (c) ISPR –/1935/0030/.....
 - (d) CAO –/1935/0040/.....
 - (e) DGMS –/1935/0050/.....
 - (f) AFMC–/1935/0053/.....
 - (g) MIST–/1935/0055/.....
 - (h) ISSB –/1935/0060/.....
 - (j) DML & C –/1935/0070/.....
 - (k) E-in-C –/1935/0080/.....
 - (l) Defence Attache –/1935/0090/.....
 - (m) Staff College –/1935/0100/.....
 - (n) BOF –/1935/0110/.....
 - (p) National Defence College...../1935/0120/.....
 - (q) Armed Force Board –/1935/0120/.....
 - (r) MODC –/1935/0130/.....
 - (s) NDC/1935/0103/.....
- (5) Other defence Services activities.. /1945/0000/.....

2. Level – 4 Economy Code Nos. Blank
3. Revenue Expenditure (Non-development):-
(Code Nos. 3/19...../0...../.....)
(Respective Operational Code to be used at Level-2 & Level-3)
 - a. **4500- Pay of Officers :**
 - (1) 4501 – Officers’ Pay
 - b. **4600 - Pay of Establishment**
 - (1) 4601 - Pay of Staff
 - c. **4700 – Allowances**
 - (1) 4701 - Dearness allowances
 - (2) 4705 - House rent allowances
 - (3) 4709 - Recreation allowances
 - (4) 4713 - Festival allowances
 - (5) 4717 - Medical allowances
 - (6) 4721 - Hill allowances
 - (7) 4725 - Washing allowances
 - (8) 4729 - Foreign allowances
 - (9) 4733 - Entertainment allowances
 - (10) 4737 - Charge allowance
 - (11) 4745 - Compensation allowances
 - (12) 4749 - Ration allowances
 - (13) 4753 - Daily allowances
 - (14) 4755 - Tiffin allowances
 - (15) 4757 - Internee allowances
 - (16) 4761 - Traveling allowances
 - (17) 4765 - Conveyance allowances
 - (18) 4773 - Qualification allowances
 - (19) 4777 - Training allowances
 - (20) 4785 - Contract allowances
 - (21) 4793 - Telephone allowances
 - (22) 4795 - Others allowances
 - d. **4800 – Supply and Services**
 - (1) 4801 – Traveling expense
 - (2) 4804 – Contingent Establishment

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- (3) 4805 - Over time
- (4) 4806 – Rent – office
- (5) 4807 – Rent – Residence
- (6) 4808 – Rent – Equipment
- (7) 4810 – Municipal tax
- (8) 4811 – Land tax
- (9) 4813 – Custom, Excise/VAT
- (10) 4814 – Other taxes
- (11) 4815 – Postage
- (12) 4816 – Telephone /Telegram/Teleprinter
- (13) 4817 – Telex /Fax
- (14) 4818 – Registration fee
- (15) 4819 – Water
- (16) 4821 – Electricity
- (17) 4822 – Gas and Fuel
- (18) 4823 – Petrol and Lubricant
- (19) 4824 – Insurance/ Bank changes
- (20) 4825 – Press organization subscriptions
- (21) 4826 – Commission/Interest
- (22) 4827 – Printing and publications
- (23) 4828 – Stationary/Seal/Stamps
- (24) 4829 – Research expense
- (25) 4831 – Books & Periodicals
- (26) 4833 – Advertisement/Circulation
- (27) 4834 – Sports materials
- (28) 4835 – Publications
- (29) 3836 - Uniform
- (30) 4837 - Passport Book
- (31) 4840 - Training expenses
- (32) 4842 - Seminar, Conference
- (33) 4844 - Sending representative
- (34) 4846 - Transportation expenses
- (35) 4847 - Reward
- (36) 4949 - Compensation
- (37) 4851 - Labour Cost

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- (38) 4852 - Purchase of Chemicals
- (39) 4854 - Purchase of unserviceable Stores
- (40) 4856 - Raw material & spare parts
- (41) 4857 - Preventive & preservatives
- (42) 4860 - CGI sheet
- (43) 4861 - Fertilizer
- (44) 4874 - Consultancy
- (45) 4875 - Cleanliness
- (46) 4882 - Law Charges
- (47) 4883 - Honorarium /fee/remuneration
- (48) 4884 - Examination expenses
- (49) 4885 - Testing fee
- (50) 4886 - Survey
- (51) 4887 - Copy charges
- (52) 4888 - Computer accessories
- (53) 4889 - Audit fee
- (54) 4890 - Occasion/Festivals
- (55) 4892 – Royalty
- (56) 4893 – Hiring charge
- (57) 4897 – Hygiene & sanitation
- (58) 4898 – Special expenses
- (59) 4899- Other expenses

e. **4900 – Repair, Maintenance & Renovations**

- (1) 4901 – Motor Transport
- (2) 4906 – Furniture
- (3) 4911 – Computer & Office equipments
- (4) 4916 – Tools & plants
- (5) 4921 – Office Building
- (6) 4923 –Govt. Installations
- (7) 4926 – Residential Buildings
- (8) 4927 – Educational Institutions

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- (9) 4930 – Meteorological equipments
- (10) 4931 – Other buildings & installations
- (11) 4932 - Engineering equipments
- (12) 4936 – Road, culvert & highways
- (13) 4946 – Irrigation infrastructure
- (14) 4947 – Drainage Infrastructure
- (15) 4951 – Hygiene & water supply
- (16) 4955 – Signal/wireless equipments
- (17) 4956 – Tele communication equipments
- (18) 4958 – Line & wire
- (19) 4959 – Pole & aerials
- (20) 4961 – Electrical installation
- (21) 4971 – Railway infrastructure
- (22) 4976 – Water crafts
- (24) 4981 – Aircrafts
- (24) 4986 – Rehabilitation
- (25) 4991 – Other repair & maintenance

f. **5900 - Grants, AIDS.**

- (1) 5911 - Medical Grants
- (2) 5921 - Research Grant
- (3) 5922 - Training Grant
- (4) 5925 - Benevolent Grant
- (5) 5927 - Funeral Grant
- (6) 5941 - Group Insurance

g. **6600 – Lump Grant.**

- (1) 6681 – Lump Grant(3/1945/0000/6681)
- (2) 6691 – Payment for Defence
Services (Lump)(3/1945/0000/6691)

h. **6800 – 7999 (Capital Expenditure).**

6800 – Procurement/Purchase of Wealth.

- (1) 6801 – Office building
- (2) 6803 – Residential building
- (3) 6805 – Other building
- (4) 6807 – Motor Transport
- (5) 6809 – Water crafts
- (6) 6812 – Camera
- (7) 6813 – Tools & Plants
- (8) 6814 – Engineering equipments
- (9) 6815 – Computer & accessories
- (10) 6817 – Computer software
- (11) 6819 – Office equipments
- (12) 6820 – Educational Equipment
- (13) 6821 – Furniture
- (14) 6822 – Laboratory Equipment & Stores
- (15) 6823 – Tele communication equipments
- (16) 6827 – Electrical equipments
- (17) 6830 – Meteorological equipments
- (18) 6831 – Railway infructure
- (19) 6833 – Roads & Highways
- (20) 6834 – Military hardwire (Arrear) (3/1945/0000/6834)
- (21) 6835 – Bridges
- (22) 6839 – Irrigation Infrastructure
- (23) 6841 – Sewarage system
- (24) 6843 – Hygiene & water supply
- (25) 6847 – Monuments
- (26) 6850 – Deep tube well & accessories
- (27) 6851 – Others
- (28) 6853 – Fire fighting equipments
- (29) 6865 – Tent & other accessories

j. **6900 – Purchase of Land and other Property.**

- (1) 6901 – Land acquisition/purchase
- (2) 6931 – Subsoil resources
- (3) 6941 – Others

k. **7000 – Construction & Works**

- (1) 7001 – Land/site development
- (2) 7006 – Office building
- (3) 7011 – Residential building
- (4) 7016 – Other building & installation
- (5) 7021 – Roads & Highways
- (6) 7026 – Bridges
- (7) 7036 – Irrigation infrastructure
- (8) 7041 – Sewarage infrastructure
- (9) 7046 – Hygiene & water supply
- (10) 7047 – Deep tube well installation
- (11) 7051 – Tele communication
- (12) 7053 – Line & Wire
- (13) 7054 – Pillar & Aerial
- (14) 7055 – Small capital works
- (15) 7056 – Electrical equipments
- (16) 7061 – Railways infrastructure
- (17) 7076 – Monuments & religious places excavation
- (18) 7081 – Others

l. **Repayment of Foreign Loan.**

- (1) 7711 – Project Loan. 2/19...../0...../7711
- (2) 7755 – Indian Loan 2/19...../0...../7755
- (3) 7761 – Other Foreign Loan 2/19...../0...../7761

m. **Payment against loans & advances.**

- (1) 7401-House Building Advances –Civilian paid from
Defence estimate 3/0962/0001/7401
- (2) 7403-Computer Advances- Civilian paid from
Defence estimate 3/0962/0001/7403
- (3) 7411 – Motor car Advances – Civilian paid from
Defence estimate 3/0962/0001/7411
- (4) 7421 – Motor Cycle Advances – Civilian paid from
Defence estimate 3/0962/0001/7421
- (5) 7431 – Bi-cycle Advances – Civilian paid from
Defence estimate 3/0962/0001/7431
- (6) 7441 – Other Advances – Civilian paid from
Defence estimate 3/0962/0001/7441

n. **Payment on Account of Pension & gratuity to the Civilian employees.**

- (1) 6301 – Payment of Pension/Gratuity
(including Family Pensions) 3/0921/0000/6301
- (2) 6311 – Payment of Gratuity
(Surrender value of Pension) 3/0921/0000/6311
- (3) 6323 – Payment of Gallantry Award 3/0921/0000/6323
- (4) 6341 – Payment of Medical Allowances
to the pensioner 3/0921/0000/6341

4. **Payment against public A/Cs of the Republic.**

Ser	Heads of A/C	Code Nos
(a)	(b)	(c)
1.	<u>Renewal & Reserved Fund – Dairy Farm</u>	7/1051/0000/9220
2.	<u>Departmental Deposits</u>	
	a. Receipt against Civil Court	7/1051/0000/9346
	b. Receipt against Criminal Court	7/1051/0000/9351
	c. Railway Deposit	7/1051/0000/9358
	d. T & T Deposit	7/1051/0000/9359
	e. PWD Deposit	7/1051/0000/9361
	f. Public Health deptt. Deposit	7/1051/0000/9366
	g. Deposit for Armed Forces	7/1051/0000/9377
3.	<u>Deposit for Works & Supplies</u>	
	a. Deposit against Loan Certificate	7/1051/0000/9381
	b. Contractors & Supplier's Security Deposits	7/1051/0000/9391
	c. Deposit against works for Govt. Organization or Civil person	7/1051/0000/9401
	d. Misc. Deposit	7/1051/0000/9418
4.	Deposit to Personal Ledger (P/L) A/C	7/1051/0000/9421
5.	<u>Other Deposit A/C</u>	
	a. Security Deposit from Cashier	7/1051/0000/9477
	b. Unclaimed Deposit against Provident Fund	7/1051/0000/9490
	c. Other Deposit	7/1051/0000/9493

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Ser	Heads of A/C			Code Nos
(a)	(b)			(c)
6.	Permanent Advances			
	Refundable Advances			
7.	a.	Advance against Works		7/1051/0000/9516
	b.	Railway Advances		7/1051/0000/9526
	c.	Other Advances		7/1051/0000/9529
8.	<u>Suspense A/C :-</u>			
	a.	Deposit for Works -- suspense		7/1051/0000/9726
	b.	Defence Suspense		7/1051/0000/9731
	c.	Other Suspense		7/1051/0000/9741
9.	Departmental Cash Control			
	1.	Defence Cash		7/1051/0000/9760
10.	Transfer Between Departmental Officers			
	1.	Transfer between Defence Services Officers		7/1051/0000/9857
	2.	Transfer between Same Departmental Officers		7/1051/0000/9861
11.	Payment of Account of GPF/BF/GI			
	1.	General Provident fund (GPF) - Civilian employees		7/1051/0000/9101
	2.	Govt. employees Benevolent fund - Civilian employees		7/1051/0000/9241
	3.	Govt. employees Group Insurance - Civilian employees		7/1051/0000/9246
	4.	Payment of Interest of GPF - Civilian employees		2/0983/0020/5301
12.	Receipts (Code no -- 1/...../...../.....)			
13.	Revenue Receipts Other than Taxes			
	Ser	Level-4 Code no	Head of A/C	Narration
	(a)	(b)	(c)	(d)
	1.	1901	Fine &Penalty	Recovery/Receipts on a/c of Fine, Penalty & L.D. Imposed
	2.	1911	Forfeiture	Recovery/Receipts against forfeiture of any claim

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Ser	Level-4 Code no	Head of A/C	Narration
(a)	(b)	(c)	(d)
3.	1999	Deduct - Refund	Refund of Fine, Penalty & Forfeited amount
4.	2007	Military in Aid of Civil power	Receipts against in Aid of Civil power
5.	2029	Audit Fee	
6.	2037	Use of Govt. Vehicle	For personal use of civil vehicle
7.	2071	Other Services & Fee	
8.	2099	Deduct - Refund	Refund of excess receipts against services
9.	2366	Tender & other Does	Sale proceeds of Tender & other Does
10.	2371	Unserviceable stores, scrap etc	Sale proceeds of Unserviceable stores, scrap etc
11.	2376	Others	Sale proceeds of other non-commercial & Obsolete stores.
12.	2399	Deduct -- Refund	Refund of excess receipts
13.	2511	Transport	Here charge of Military Arms
14.	2521	Arms	Receipts for sale, use or transfer of old or new Military Arms.
15.	2525	Rent of Building	
16.	2533	Gas, Elect & Water	Recovery against Gas, Elect & Water charges
17.	2537	Sending of Mily to UN Mission	Recovery of Govt. dues from the persons sent to UN Mission
18.	2541	Other receipts	
19.	2671	Recovery of overpayment	
20.	2681	Misc. Revenue & receipts	
21.	2601	Pension contribution	Receipts against contribution to pension and gratuity
22.	2611	Leave Salary Contribution	Receipts against leave `Salary contribution

5. **Receipts/Recoveries against Loans & Advances.**

Ser	Heads of Account	Code Nos
(a)	(b)	(c)
1.	House Building Advances - Civilian paid from Defence estimate	1/0962/0001/3901
2.	Computer Advances - Civilian paid from Defence estimate	1/0962/0001/3903
3.	Motor Car Advances - Civilian paid from Defence estimate	1/0962/0001/3911
4.	Motor Cycle Advances - Civilian paid from Defence estimate	1/0962/0001/3921
5.	Bi-Cycle Advances - Civilian paid from Defence estimate	1/0962/0001/3931
6.	Other Advances - Civilian paid from Defence estimate	1/0962/0001/3941
<u>Recovery of Interest on</u>		
7.	House Building Advances - Civilian paid from Defence estimate	1/0962/0001/1632
8.	Computer Advances - Civilian paid from Defence estimate	1/0962/0001/1633
9.	Motor Car Advances - Civilian paid from Defence estimate	1/0962/0001/1634
10.	Motor Cycle Advances - Civilian paid from Defence estimate	1/0962/0001/1635
11.	Bi-Cycle Advances - Civilian paid from Defence estimate	1/0962/0001/1636
12.	Interest on Other Advances -	1/0962/0001/1651
13.	General Provident fund (GPF) - Civilian employees	6/1051/0000/8101
14.	Govt employees Benevolent fund - Civilian employees	6/1051/0000/8241
15.	Govt employees Group Insurance - Civilian employees	6/1051/0000/8246

6. **Receipts/Recoveries against Rates & Taxes.**

Ser	Heads of Account	Code Nos
(a)	(b)	(c)
1.	Income Tax other than Company Tax	1/1141/0000/0111
2.	Deduct – Refund	1/1141/0000/0199
3.	VAT on Imported foods	1/1133/0000/0301
4.	VAT on Local goods & Services	1/1133/0000/0311
5.	Other VAT	1/1133/0000/0391
6.	Deduct- Refund of VAT	1/1133/0000/0399
7.	Customs Duty	1/1133/0000/0401
8.	Customs Surcharge	1/1133/0000/0411
9.	Deduct – Refund of Duties	1/1133/0000/0497
10.	Deduct – Refund of Import Duties	1/1133/0000/0499
11.	Recovery of Export Duties	1/1133/0000/0501
12.	Recovery of Excise Duties	1/1133/0000/0601
13.	Electric Duties	1/1133/0000/0801
14.	Travel Tax	1/1133/0000/0911
15.	Turn over Tax	1/1133/0000/0921
16.	Insurance Premium Tax	1/1133/0000/0941

7. **Receipts & Recoveries on behalf of other Department.**

Ser	Heads of Account	Code Nos
(a)	(b)	(c)
1.	Rent - Non Residential Building	1/3237/0001/2101
2.	Rent - Residential Building	1/3237/0001/2111
3.	Rent of Abanddant House	1/3237/0001/2115
4.	Recovery on a/c of Gas - TITAS	1/3237/0001/2117
5.	Recovery of a/c of Gas- BAKHARABAD	1/3237/0001/2119
6.	Recovery of a/c of Gas- JALALABAD	1/3237/0001/2121
7.	Recovery on a/c of water & sewerage	1/3237/0001/2123
8.	Recovery on a/c of Electricity	1/3237/0001/2125
9.	Recovery on a/c of Municipality	1/3237/0001/2127
10.	Recovery of Other Rent	1/3237/0001/2151
11.	Deduct - Refund	1/3237/0001/2199
12.	Rent of Housing Estate	1/323/0000/2135

8. Receipts against Public A/C of the Republic.

Ser	Heads of Account	Code Nos
(a)	(b)	(c)
1.	Renewal & Reserved Fund -- Dairy Farm	6/1051/0000/8220
2.	Departmental Deposits	
	a. Receipt against Civil Court	6/1051/0000/8346
	b. Receipt against Criminal Court	6/1051/0000/8351
	c. Railway Deposit	6/1051/0000/8358
	d. T & T Deposit	6/1051/0000/8359
	e. PWD Deposit	6/1051/0000/8361
	f. Public Health deptt. Deposit	6/1051/0000/8366
	g. Deposit for Armed Forces	6/1051/0000/8377
3.	Deposit for Works & Supplies	
	a. Deposit against Loan Certificate	6/1051/0000/8381
	b. Contractors & Supplier's Security Deposits	6/1051/0000/8391
	c. Deposit against works for Govt. Organisation or Civil person	6/1051/0000/8401
	d. Misc. Deposit	6/1051/0000/8418
4.	Deposit to Personal Ledger (P/L) A/C	6/1051/0000/8421
5.	Other Deposit A/C	
	a. Security Deposit from Cashier	6/1051/0000/8477
	b. Unclaimed Deposit against Provident Fund	6/1051/0000/8490
	c. Other Deposit	6/1051/0000/8493
6.	Permanent Advances	
	a. Advances Drawn by D.D.O	6/1051/0000/8501
7.	Refundable Advances	
	a. Advance against Works	6/1051/0000/8516
	b. Railway Advances	6/1051/0000/8526
	c. Other Advances	6/1051/0000/8529
8.	Suspense A/C	
	a. Deposit for Works -- suspense	6/1051/0000/8726
	b. Defence Suspense	6/1051/0000/8731
	c. Other Suspense	6/1051/0000/8741

Ser	Heads of Account	Code Nos
(a)	(b)	(c)
9.	Departmental Cash Control	
	a. Defence Cash	6/1051/0000/8760
10.	Transfer Between Departmental Officers	
	a. Transfer between Defence Services Officers	6/1051/0000/8857
	b. Transfer between Same Departmental Officers	6/1051/0000/8861

Ref:

1. Defence Services Classified Hand Book-1999 published by CGDF.

9. **CIVIL WORKS - (Expenditure & Receipts).** The detailed Budget Codes of the Concerned Civil Deptt/ Organizations or Code No of the Public A/Cs of the Republic to be used while executing any such works by the MES. The accounts of the same are to be settled through Civil Exchange A/C.

This supersedes Routine Instruction No 584 of 1990.

ROUTINE INSTRUCTION NO 502/2008
PAYMENT OF BILLS AND MUSTER ROLLS

1. It is the duty of a GE/AGE who employs labours on Muster Rolls to ensure that the labour is paid regularly and promptly. In no case the payment should be delayed more than a week after expiry of the period of employment.

2. There is no reason why the raising of audit objections or observations by the UA should hold up payment. In such cases written instructions should be given to the UA by the GE/AGE etc. requiring immediate payment to be made pending later disposal of audit objections or observations. The reason for disregarding the advice of the UA should be recorded in writing for the information of the SFC/LAO concerned. Such written instructions will be accepted and complied with by the UA. These instructions issues with the concurrence of the CGDF. In this regards AHQ, E in C's Br Wks Dte Ltr No. 100/5/E-1 dt: 14-6-06 should strictly followed.

This supersedes Routine Instruction No 521 of 1990

ROUTINE INSTRUCTION NO 503/2008
ACCOUNTS SECTION IN GEs/AGEs OFFICES

1. The accounts section in the GEs/AGEs offices will be in the charge of Unit Accountant belonging to the CGDF who will act as Financial Assistant to the GEs/AGEs.
2. Following work is normally done in this Section :
 - a. Scrutiny and check of appropriations and allotments.
 - b. Scrutiny of draft notices of tender and draft contract agreements.
 - c. Maintenance of lists of contracts and their scrutiny.
 - d. Scrutiny of measurements books and the abstract of measurements, check of all bills and other vouchers including allocation before submission to the Controller of Accounts. Custody of blank and completed measurements books.
 - e. Pre-audit of all bills, muster rolls, casual personal, bills and Running Account Receipts which the GEs/AGEs are empowered to pay and post audit of similar bills etc. paid by an outstation SDO.
 - f. Submission to the Controller of Accounts of all bills and vouchers (Completed in all respects).
 - g. Maintenance of records and registers pertaining to Revenue Receipts and issue of Rent Bills (See RI 505 and custody of blank Receipt Books).
 - h. Maintenance of accounts records relating to stock (See chapter X, Regulations for the MES) and checked for priced Stock List.
 - j. Hundred per cent check of entries in the construction account with supporting vouchers.
3. In this regards AHQ, E in C's Br Wks Dte Ltr No. 100/5/E-1 dt: 14-6-06 should strictly flowed.

ROUTINE INSTRUCTION NO 504/2008
MAINTENANCE OF AUDITABLE DOCUMENTS

1. Register of Appropriations (BAFW-2244)

a. It is maintained by the MES personnel under the supervision of the UA. All allotments made to the GE/AGE by the CMES and higher authority and their further division to SDOs etc. will be recorded. The UA checks the entries made in this register with the orders of allotment and transfer of funds passed by the competent authority from time to time and initial the remarks column in token of check. He also sees that the sanctions for transfer of funds are in order (See para 513 of MES Regs).

b. Applications for transfer of funds in respect of appropriations for standing charges placed at the disposal of the MES authorities will normally be signed by the MES Officers for the Commander's concerned

2. Register of Contracts

a. The register of all contracts relating to the Division together with duplicate copies of those contracts and of any subsequent amendments there to. The UA before transmitting the original agreements to the SFC, satisfies himself that the contracts are on the forms authorized in the Regulations for the MES that any alterations are in order and that the concurrence of the SFC and the legal authorities has been obtained where necessary.

3. Measurement book

a. The measurement book (BAFW-2261) which is the basis of all accounts of quantities of work done or of materials received that have to be measured or counted is scrutinized by the UA and checked arithmetically.

b. The UA maintains a register of Measurement Book wherein is recorded as soon as a stock of these books is received, the Serial No. of each books, the name of the individual to whom issued, date of issue, date of transfer from one subordinate to another, the date of final return for record and the date due for destruction. These particulars will also be entered inside the cover of the measurements

book. A measurements book will only be issued when ordered by GE/AGE who will specify the SDO for it is required.

c. Completed measurement books will be preserved for ten years after the date of completion of works the measurement or any part of which are recorded therein.

d. Scrutiny of measurement books is normally conducted in accordance with following checks;

(1) The nomenclature of the item of works as recorded in measurement books should correspond exactly to that of the item of works as shown in the Abstract (BAFW-2264) and /or in the Bill.

(2) The total of the abstract of measurements must be the same as the total entered in the bill from. All calculations in the measurement book must be checked.

(3) The printed instruction in the measurement books should be complied with.

(4) MES Schedule of Rates should be consulted for checking rates at which payment for work is claimed.

4. Bill etc

a. The UA keeps a Register of Specimen Signature (BAFA-782). In these names of all officers, subordinates who prepare bills of contractors, muster rolls etc. and all imprest holders will be entered in separate sections. Specimen Signature will be furnished by the head of the office concerned to the UA who will post them in the register against the relevant entries. The UA settles as many objections as possible by discussion with the GE/AGE and attaches to the bill a list of the objections which he has settled with GE/AGE and also as memorandum giving any points on which there is a disagreement and on which a ruling is required. He sees in particular that contracts are, if necessary, duly amended under sanction of the competent engineer authority before the final bills are signed by contractors so as to cover any changes in the final bills not payable under the contract as originally executed.

b. The detail of unpaid wages which are entered in the Register of unpaid wages (BAFW-2259) kept by Imprest holder under paragraph 556, Regulations for the MES, is checked and initialed by the UA who notes the number and date of the voucher against the entry in the register when payment is made.

c. The UA also checks bills in respect of rent for hired buildings, rent for land and rates and taxes before forwarding them to Controller of Accounts for preaudit and payment. He also checks, before payment, all bills for contingent charges referred to in paragraph 168, Regulations, for the MES except relating to law charges, language rewards and honoraria and other miscellaneous expenditure which are not definitely classified as contingent charges, and which are pedicure which are not definitely classified as contingent charges, and which are preaudited by the SFC.

5. Cash Book (BAFW-2246)

a. The cash book will be maintained by an MES Upper Division Asstt to be selected by the GE/AGE from their staff and designated as Cashier. The clerk posted as Cashier will have to deposit security as laid down in MES Regulations before he takes over charge. He may be given other duties as clerk. His work in respect of the cash book is checked by the UA.

b. The Cash Book and the supporting vouchers will, therefore, be accessible to the UA at all times so that the allocation of vouchers can be watched by him before submission to the SFC in consultation with the CMES but it will be balanced only once a month as laid down in paragraph 536, Regulations for the MES. The copies of cash book are also verified by the UA before submission to the SFC.

6. Submission of Bills and Vouchers to the Controller of Accounts.

Bills and vouchers (cash and adjustment) sent to the Controller of Accounts are checked by the UA. In the case of muster rolls and the casual personal bills, only the allocation sheets will be submitted. They will be accompanied by a covering schedule (BAFW-2248) which will be prepared in duplicate, one copy being retained by the UA. Several

vouchers pertaining to the same sub-division may be entered on one schedule. Vouchers paid by the GE or other imprest/cash assignment holder from his imprest/cash assignment will be sent to the Controller of Account together with the copy of the Cash Book. After payment or adjustment as the case may be, the Controller of Accounts will note on the schedule the action taken (i.e. number date amount of the cheque in the case of payments and adjustment voucher in other cases) and return it to the GE/AGE. The schedule will be passed to the UA who attach to it the duplicate copies of bill before its return to SDO for note and record.

7. Monthly Closing of Accounts Registers.

a. At the end of each month the Unit Account will complete the contingent bill register (BAFW-2272) from the particulars given in the Cash Book and the contingent bill forms furnished by other cash assignment/imprest holders in the Division.

b. The UA reviews monthly the various abstracts received from the GE/AGE and the various Revenue Ledgers maintained by him and furnish the SFC by the 10th of each month a statement of item placed under objection.

8. Stores. Following checks are exercised by the UA in respect of stores transactions:

a. The UA sees that the rates charged in receipt vouchers, receipted indents and the unstamped acknowledgements for materials issued to contractors are correct in accordance with the contract agreements where they exist, that the stores have been correctly allocated to the work concerned, and that in the case of stores issued to a contractor for use on works for which he is to be paid for at inclusive rates, the rate of recovery from the contractor has been shown on the indent and that if a contractor is only to be paid for fixing the cost of stores is allocated direct to the work concerned.

b. The priced stock list issued by the GEs/AGEs under paragraph 621, Regulations for the MES is checked

ROUTINE INSTRUCTION NO 505/2008
RECORD FOR REVENUE AND RECEIPTS

1. The UA maintains the following records;

a. **Rent Assessment Ledger (BAFW-2239)**

(1) Rent Assessment Ledger is kept for permanent record of all rentable buildings, including other buildings used as quarters or shops whether Govt. owned leased, hired or appropriated. Entries must be made whenever additions or alteration necessitates a revised assessment of rents. To ensure against any loss to the State due to delay in amending these ledgers, the GEs/AGEs will arrange that when the accounts of works involve expenditure on the construction, acquisition or equipment of a building intended to be used as a residence or expenditure on renewals or additions, information in regard to the amount of expenditure involved is furnished to the Unit Account as soon as possible. An approximate figure should be given if the completion report is not immediately available. This amount is entered by the UA in the ledger in pencil pending submission of the completion report which is in all cases to be certified by the UA.

(2). The UA compares annually the ledger with the Register of Buildings in order to see that the capital value of buildings as shown in the ledger agrees with that shown in the return. The UA records in these ledger certificate to the effect that they have in all cases been revised where necessary.

b. **Revenue Ledger (BAFW-2240)**: In Revenue Ledger revenue due and recovered for each building or quarter or from other sources of revenue (lease of land, brick-field etc.) will be recorded. A separate folio will be opened for each building, quarter or miscellaneous item of revenue and entries will be made therein as transaction. Separate revenue ledgers will be maintained for Code Head of Army, Air Force, Bangladesh Navy and for Civil Works Revenue, etc. The Ledger will be initialled monthly by the GE/AGEs in token of their scrutiny. On receipt of the occupation returns

the names of occupants and periods of occupation will be entered in the ledger and on return of the rent bills or on receipt of an intimation of payment the recoveries will be noted therein See paragraph d (3) below Recoveries on account of charge for electric energy and water from consumer's paying direct to the MES are watched through the consumer's ledgers. These will be treated as a separate classes of revenue, a folio of the Revenue Ledger being allotted to each class of such receipts.

c. **Revenue Ledger Abstracts (BAFW-2240)**

(1) Revenue Ledger Abstracts are maintained to show assessments, realization and balances, monthly by stations under various Code heads of Revenue. These will be posted from the Revenue Ledgers at the end of each month, with progressive total to the end of the month. The monthly and up-to-date totals will be shown at the bottom of the form. Separate abstracts will be prepared showing details under each head of Revenue and a summary abstracts will be prepared giving the totals of different minor heads and sub heads for the station. Separate Revenue Ledger Abstracts will be maintained in accordance with the Revenue Ledgers.

(2) The resultant totals will be entered on monthly Expenditure Returns (BAFW-2251) This will be suitable altered and designed "monthly Revenue Return" showing the total revenue of the Division under the various Code heads. This return will cover all classes of revenue, whether actually realized by the MES officers and included in their Cash Books or adjusted by SFC in which case necessary intimations will be sent to the UA to enable him to post the Revenue of Accounts and to the CMES/Station HQ.

(3) The CMES/Sta HQ will maintain a Register of Revenue on BAFW-2240 (Revenue Ledger Abstract) which will show the revenue collected for all the Division in a district. He will submit to the DW&CE a similar monthly return for his Area. The DW&CE will maintain graph showing the revenue for the MES Wing as a whole.

d. **Rent Bills.**

(1) On receipt of the Occupation Returns (BAFW-1828) from the GEs/ AGEs, the UA after necessary check enters the names of occupations and periods of occupation in the Revenue Ledgers and prepares and issue rent bills (BAFW-2241) on behalf of GEs/AGEs in cases where rent etc. is recoverable. The appropriate columns are electric and water charges and other incidentals and filled in the UA on receipt of the Return of Recoveries. See paragraph 3 below.

(2) In the case of messes the recovery is made by the Controller of Accounts concerned at the time of paying the mess allowance.

(3) On return of one copy of the rent bill the UA enters up the Revenue Ledger.

(4) In case of individuals vacating quarters before the last day of the month the UA prepares and submits a rent bill immediately on receipt of the necessary intimation and any balances remaining unrecovered is intimated by him through the SFC to the Accounts Officer to whose circle of the audit the individual is transferred. To admit charges on account of rent buildings, electric energy and water etc being adjusted before the preparation and issue of the last pay certificates of officers. The authority responsible for the allotment of quarters should intimate the probable date of vacation of the quarter to the GEs/AGEs concerned at least 15 days before the anticipated date of vacation.

(5) As regards electricity and water charges the amounts will be calculated approximately to cover the cost of electric energy and water to be consumed during the period involved. Any small discrepancy discovered on the actual meter reading will be written off by the GEs/AGEs as laid down in Regulations for the MES.

(6) The OC Unit or local head of the service or department concerned will be responsible for arranging recovery of the charges in question to enable him to furnish the certificate prescribed in Army Regs.

(7) In the matter of recovery of rents etc. the UA pays particular attention to the rules relating to the occupation of public quarters. He also watches that if the rent recoverable from Govt. servants is limited to a certain percentage of his emoluments, and such emoluments are charged retrospectively the rate at which rent is recovered is also changed retrospectively. Necessary intimation to this effect is sent by the SFC concerned.

(8) When Govt. building or parts therefore are let to private individuals etc. the UA sees that their insurance is effected as required by paragraph 201, Regulations for the MES.

2. **Electricity, Hire of Fans etc.**

a. Electric energy will normally be measured by means of meters which will be read monthly by the meter reader as close to the end of the month as possible. The reading will be entered in the meter card (BAFW-2182) attached to the meter and in the Meter Reader book (BAFW-2183) and from the latter entries will be made in Consumer's Ledger. Charges for hire of fans, security deposits and incident charges such as replacing fuses will be included in this Ledger. This ledger will also contain details of buildings which are charged for at a flat rate. The GEs/AGEs will arrange that the changes in the allotment and vacation of quarters are intimated to the SDO who maintains the Consumers Ledger so that meter may be read and charges for broken period made without delay.

Note: Consumer's Ledger (Electric BAFW-2184) will not be entered up for paying consumers from whom recoveries are required to be made by the MAD. In such cases the Return of Recoveries (Electric BAFW-2218) will be prepared direct from the Meter Reader's Book Electric (BAFW-2183).

b. The SDO will prepare the Return of Recoveries (Electric BAFW-2218) from the Consumer's Ledger or from the Meter Reader's Book Electric (BAFW-2183) as the case may be and forward it to the UA so as to reach him not later than the 10th of the month following that to which the charges pertain. From the Return, the UA completes the appropriate columns in the rent bill (BAFW-2241).

c. In the case of private consumer from whom recovery is made by the MES the monthly bill (BAFW-2217) will be prepared by the SDO and sent to consumers by the 5th of the following month accompanied by a Receivable Order (BAFW-507) which should give such details as will enable the Treasury Receipt to be identified with the relevant bill without the bill itself, unless standing arrangements to make recoveries in cash have been made. The Treasury Receipt will be returned to the SDO by the 22nd of the month who will prepare an abstract of all recoveries and forward it to the UA. The UA sees that the total of such recoveries made by the MES, as recorded/shown in the Return of Recoveries as recoverable by the MES from these consumer's. In the case of any discrepancy the SDO will attach a brief explanation.

d. In the case of entitled non-paying consumer's, the monthly consumption will be measured by means of meters (or assessed by the GEs/AGEs where meters are not installed or are out of order), and entered in the Consumer's Ledger (Special) BAFW-2170. A voucher showing the total number of units consumed will be prepared annually in triplicate and priced at the prescribed rate by the GEs/AGEs.

3. **Water Supply.**

a. The procedure for the recovery of charges for water supply in military station and cantonment stations, other than those refereed too in paragraph 3 (c) below will be as follows:

(1) Water supplied from a MES water supply installation may be charged for by means of a water rate or tax based on the annual rental of a building or under an agreement, or by meter. The meters are read monthly by the meter reader as near the end of the month as possible. The reading will be entered in the meter card (BAFW-2296) attached to the meter and in the meter reader's book-water (BAFW-2183-A) and from the latter entries will made in the Consumer's ledger.

(2) The SDO will prepare the Return of Recoveries (Water) BAFW-2298 and forward it to the UA so as to reach him not later than the 10th of the following month.

b. In a non-cantonment station the recoveries on account of water supply in respect of entitled paying and non-entitled consumers are made by the Military Accounts Department in the case of officers and other ranks who are paid by the department or by a Civil Accounts Officer in accordance with the procedure laid down in paragraph 1 (d) (a) above. In respect of all other non-entitled consumers the amounts will be billed for and recovered by the MES in accordance with the instruction laid down in paragraph 2 (c) above.

c. In a cantonment station when the MES Officer is functioning as the "Officer" under Section 233 of the Cantonment Act (Act II) of 1924, the recoveries are to be effected by the Cantonment Authority. No. Consumer's Ledger will be maintained and the Return of Recoveries which will be entered direct from the Meter Reader's Book and or assessments made by the GEs/AGEs will be rendered to the Cantonment authority monthly. The GEs/AGEs will supply the UA with a quarterly statement showing the total cost, at the prescribed flat rate, of all water supplied to non-entitled paying consumers for each of 3 months concerned. The Cantonment Authority will submit to the UA, a quarterly statement showing the amount retainable as collection and audit charges in respect of each of three months of the preceding quarter. The UA after posting his Revenue Ledger credits the amount to the Code Head Deduct recoveries from paying consumers in Cantonment by deduction and forward the statement of the total cost of water supplied, less the collection and audit charges to the SFC for adjustment. The recoveries are made and watched by Cantonment Authority who will remit into the treasury the total collection less the cost of collection and audit charges. The Treasury receipt for the amount will be sent to the SFC concerned.

4. **Furniture (for BAF and BN Wings).** The SDO concerned will intimate to the UA the Capital cost of the articles supplied in each case. The cost of articles of Ordinance supply provided on payment or hire in military buildings will also be intimated to the UA. The UA after checking the rates and calculations will enter the capital value etc. in the Rent Assessment Ledger (BAFW-2239). The amount of assessed rent only will be shown in the Revenue Ledger. The procedure for recovery etc. of rent for furniture will be as laid down for rent of buildings.

5. **Compilation of Revenue Receipts.**

a. Rent bills and other vouchers relating to revenue receipt are posted by the UA into the revenue Ledger and Revenue Ledgers Abstracts in the manner indicated in paragraphic, above. The UA prepares the necessary Schedules of Debits to Remittances, etc. in respect of credits other than those where recoveries are affected by the SFC concerned.

b. In cases where recoveries on account of rent, etc. are made through Civil Accounts Officers, the Unit Accountant will see that copies of the accepted rent bills are sent along with the schedule referred to above to enable the SFC to raise responding debits in anticipation of the original credits. In respect of recoveries made by the other Controllers. responding debits will be raised only after the receipt the receipt original credits.

6. **Proforma Recoveries.** In the case of certain manufacturing and quasi-commercial concerns Proforma accounts include the rent of accommodation and internal electrical installation, charges for electric energy and water. Statistics for the purpose are intimated by the MES to the formation concerned. The following procedure will be adopted.:-

a. **Accommodation.** In the case of RV & F Service medical Stores Depots, Workshops, Bakeries, Butcheries and Army Ordnance and Clothing Factories, a simple bill will be prepared in triplicate by the GEs/AGEs giving the following information :

(1) Total capital value of the buildings occupied including quarters but excluding officers quarters etc. for which rent is paid direct to the MES, references to pages of Register of Buildings will be quoted.

(2) Rate at which rent is assessed.

(3) Total amount of rent. The bill will be submitted in duplicate the OC Depot, etc. for acceptance in the month of June. It will be sent quarterly for Medical Stores Depots. Workshops and half yearly for RV & F Service. One copy of the accepted bill will be returned to the GEs/AGEs.

b. **Electric Energy and Water.**

(1) In the case of entitled non-paying consumers of manufacturing and quasi-commercial concerns detailed in clause (a) above, the MES installations, an abstract showing the totals for electric energy and water for each concern will be prepared in duplicate after the Consumer's Ledgers have been entered up. One copy of the abstract will be forwarded to the UA not later than the 10th of the month following the end of the period stated in clause (a) above. The UA then intimates the electrical installation (except in the case of MES installations) to the SFC concerned for Bakeries Butcheries and in cases to the parties concerned.

(2) In the case of the Arms and Departments of the Services a separate page of the ledger will be allotted for entering up the assessed consumption of electric energy and water, etc., in respect of each Arm and Department. This will be entered up at the end of every quarter. These statistics are to be used for the preparation of the monthly and annual returns of the installations concerned.

CHAPTER -II

ROUTINE INSTRUCTION NO 506/2008
AUDIT OBJECTIONS

1. PAO 138 dated 20 Feb 51 is reproduced for compliance by all concerned :
2. “During the course of audit of the accounts of various units and formations by Local Audit officers of the Defence Audit Department, certain irregularities are being found owing to the non-compliance with existing orders which result in avoidable audit objections being raised and repeated almost on every audit visit. Much labor on the part of the administrative and audit authorities will be saved by the strict observance of existing orders for the maintenance of accounts. A list of the more important typical audit objections generally raised by Local Audit Officers is published as an annexure to the order for information and guidance”

For details Annex-`A` to this RI as guidance for all concerned

This supersedes Routine Instruction No 561 & 581 of 1990.

ANNEXURE TO PAO NO 138/51

1. Audit objections raised by Local Audit Officers on the Accounts of Units/Formations.

M T and POL Accounts

2. Duty slips are not being completed in all respects and nature of duty is not specified in clear terms, as required by IAO/47 and PAO/554/49.

3. Vehicles are used for short distance in contravention of PAO 146/47, Para 5.

4. Vehicles are sometimes used between places connected by rail contrary to the restrictions imposed by APOs 554 and 510/49.

Railway Warrants and Credite Notes

5. Whether the warrant is to be exchanged for tickets by Express/Mail/Passenger is not indicated as required under PAO 46/49.

6. Whether stores are to be dispatched by goods or passenger train is not indicated on military credit notes. Sanction of the CFA is also not obtained when stores are dispatched by passenger train instead of by goods train as required by RAI Instruction 906.

Miscellaneous

7. The accounts of all public funds are not balanced monthly in case book as required by FR Part II, Rule 285.

MES Accounts Voucher

8. Transfer vouchers are not prepared in respect of transfers made within Sub-Divns, but entries are made in the ledger giving reference to page no of the ledger from which transferred. Every entry in a ledger is required to be supported by a proper voucher.

9. The quantity of stores consigned is not taken in full in ledgers as shown on the vouchers as required by MES Regs 620.

Baby Indents

10. Indents are not prepared at the time and on the dates of issue of stores as required by MES Regs Para 678.

11. The name of work to which stores are issued and consumed is not being given in the baby indents as required by MES Rages Para 679.

Meter Readers Book

12. Excess consumption of electricity and water over and above the authorised scale is not being watched properly and action is not being taken to recover the amounts of excess consumption of electricity and water charges from entitled consumers i.c. JCOs, NCOs and ORS etc. vide MES Regs para 787 and AI (I) 161/40.

13. The figures shown in the Meter Readers Books are not being correctly carried over to the return of recoveries electricity/water vide MES Regs para 466.

Barrack Damages

14. Recovery on account of barrack damages is not being watched properly. Provisions of AI (P) 38/49 are not being strictly adhered to.

15. Worn out fittings etc and material obtained from demolition are not being taken on charge in the Demolition Register promptly as required by MES Rgs para 690. These are left over for months or till is brought to notice by the audit authorities.

16. Alterations, corrections and erasures of figures in the ledgers are generally noticed in the accounts. The provision of FR Part II, Rule 71 (vi) are not being followed in such cases.

Stores

17. a. Stores of one category are transferred to another without preparing any transfer voucher duly signed by the GE.

- b. Stores are transferred from demolition to store-in-hand ledger in excess of requirements (MES Regs para 679 refer).
- c. Stores are declared unserviceable without any survey report by the competent authority.
- d. Nomenclature of stores are change without proper sanction (MES Regs Para 205 and 675 refer).
- e. Periodical stock verification is not being carried out as required by MES Regs para 675.

Furniture

- 18. a. Sanction for the issue to officers of Civil Dept. or non-Military Depts. is not obtained from the competent authority.
- b. Expense vouchers are prepared in parts to bring the amount under the financial powers of the GE/AGE in contravention of the provisions of MES Regs Para 208.

Plant Record Book

- 19. Hire charges for refrigeration's from Military Officers are not regularly recovered on the plea "it was not in order" or "it was not used."

Electricity

- 20. Agreements are not entered into with supplying copies for the supply of electric energy, nor is any agreement concluded in case where supplies are made to private firms and Central Departments (MES Regs, para 728 and 361).
- 21. Register of building is in, some cases, incomplete. Additions/alterations to buildings or hutted accommodations are not entered therein. In some cases copies of these registers have not yet been furnished to UA or the Controlled concerned, as required by MES, Regs para 343 and 344.

Construction Accounts

22. a. Addition/alteration to allotments is not noted.
- b. Amount technical sanction is not noted.
- c. Summary of folios pertaining to same code head is not maintained.
- d. Cost of stores issued to contractors are not posted in the contractors accounts as soon as they are issued.
- e. Contractors column is not completed with the result that the balances in the Contractor's Accounts do not agree with those in the contractor's ledger.
- f. The contractors accounts are not closed properly with the result that expenditure return does not tally with the contractor's accounts.
- g. Liabilities are generally omitted to be noted. Where noted they remain outstanding for a considerable time (MES Regs, Appendix "L" Instruction printed to BAFW-2242). Miscellaneous

Miscellaneous

23. In cases where funds under a particular sub-head are not sufficient, the expenditure is booked to some other sub-head under which they are sufficient lapse of funds under the latter sub-heads (MES Regs para 50 refers) This is a serious irregularity and must be avoided by all concerned.

Formation of a MES Inspection Party under the Director of Audit Defence Service

24. With a view to conduct the test audit of the accounts of major works and other important item of work carried out by the MES. MES inspection party headed by audit & Account Officer of the Audit Defence Service has been formed by the Director of Audit Defence Services Dhaka.

25. As the Inspection Party would be visiting MES formation all over Bangladesh, it is enjoined on all concerned that full co-operation and assistance should be extended to the party. The following auditable documents of required by the party in the discharge of its duties and responsibilities may please be readily made available to them:

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RESTRICTED

- a. Register of Rail Road Warrants Convoy Notes etc.
- b. Security Deposit Register
- c. Register of Unpaid Wages.
- d. Store in hand Ledger Contingencies.
- e. Money Order Register.
- f. Fuel A/C.
- g. Register of appropriations.
- h. Register of approvals to works.
- j. Register of Books and Forms.
- k. Register of Barrack Damages.
- l. T.T.Call Register.
- m. Register of Typewriters/Computers
- n. Stationary Register.
- p. Register of Service Book.
- q. Construction Accounts.
- r. Livery Register.
- s. Register of M.B.
- t. Register of Losses
- u. Register of Suspense account.
- v. Register of administrative Sanctions
- w. Bill Books
- x. Details drawings and specifications (Whenever demanded).
- y. **Bills of Quantities/Detailed estimates:** In cases when the contracts are based on BQ these would be produced to the Accountant of Test audit specially deputed for this purpose.

This supersedes Routine Instruction No 561 & 581/90

ROUTINE INSTRUCTION NO 507/2008
REVISED PROCEDURE REGARDING SETTLEMENT
OF AUDIT OBJECTIONS

1. A review of outstanding objections on MES accounts has shown that the objections generally remain outstanding due to one or other of the following reasons
 - a. Delay in progress by MES. In certain case the irregularity is finally accepted by the MES Authorities, but the matter is not progressed further for regularization, recovery action, as the case may be.
 - b. Inaction on the part of the audit staff. Cases happen where necessary action as required by audit is taken by the Executive Authorities, but the same is not provided promptly.
 - c. Lack of proper Liaison between the Executive Authorities & Audit Staff. There is dispute regarding the validity of objections, but the matter is not put up to higher authorities for a final decision. On certain occasions objections, for trifling amounts remain outstanding, because the executive/audit authorities do not agree as to under whose financial/waiver powers the item is to be regularized.
2. This state of affairs is viewed to be unsatisfactory as it involves unnecessary waste of time and efforts and gives an erroneous impression of the state of MES accounts and the number of outstanding objections.
3. a. It has, therefore been decided in consultation with the CGDF that the following procedure will be followed with effect from 1 July 90 for settlement of objections.
 - (1) The admin office/Supdt or Head Clerk of the Office concerned will discuss all the objections with the Supdt i.e. head of the party concerned soon after conclusion of the audit.
 - (2) All audit objections of routine nature which can be waived under rule 165 F,R Part I will be put to the LAO/SFC for their order.

(3) Only objections of serious or those having financial implications, which have not been settled will be discussed by the LAO with the head of the office.

(4) No objection/inspection Reports will be issued without discussing the same with the head of the office/establishment whose accounts have been audited. The responsibility to ensure that the objection statement is discussed within the period of tour programmer of the LAO will rest on the executive authorities. If in exceptional cases the time at the disposal of the LAO is not enough and a prolonged stay is absolute necessary, he should report the circumstances in detail to the SFC and obtain his prior concurrence.

(5) The above procedure will also be followed generally in respect of SSO Review Reports and Test Audit Objections. As regards the letter, attention is invited to para 147 Section III Chapter 6 Manual of Audit Defence Services.

(6) All types of audit objections including Review Reports and Test Audit Objections etc. Which remain outstanding after the above steps have been completed, will be recorded in the form of objection statement and issued before the team leaves the office. Typing responsibility will be of the Executive.

b. If there is any difference of opinion between Executive and Audit regarding the substance of an audit objection with reference to interpretation of regulating the procedure laid down in Rule 93 F.R Part II will be followed to resolve the deadlock.

c. If the head of the office and LAO or respective officers do not agree regarding settlement or finalization of some the objections referred to in para 3 above, the LAO or the audit office and head of the office will discuss the disputed points with CMES, who will sort his routine visit to the concluding stage of LAO's visit.

d. To enable the CMES to do so, the LAO will send a copy of his six monthly programmer to the CMES and keep informed of any change therein. The LAO will simultaneously send a list of old outstanding objections office wise to the CMES with a copy to the

head of office for discussion. The head of office on receipt of the list will at once send a report of CMES indicating the latest position and his remarks against each item. The objections along with the current objections will than be discussed by CMES/head of office LAO's and detailed in the proceeding sub para.

e. The objections that the LAO/CMES have not been able to finalize will be reported by the CMES through the Controllers to DW & CE concerned (with a copy of LAO) for fixing a date of discussion with the representative of the Controllers etc. on the same lines. This must be done in the 4th month.

f. If the controller after discussion with the representative of DW & CE upholds the objections, his decision will be accepted under Rule 163 FR I A ref against such decision may, if necessary, be made by DW & CE to CAG (Controller of Audit General). This process will be finalized within 5 months at the latest.

g. After a case has been dealt with as at (f) above, the E-in-C's Branch will contact the CAG office with a view to settling all outstanding points for issue of necessary instructions to DW & CE or taking regularization action, as the case may be. Cases requiring clarification /orders by Ministry of Finance will be taken by E-in-C's Branch.

4. The adoption of the above procedure will need discussion between Head Asst Clerk, Admin Offr, Supt/Supdt LAO/CMES, Reps of SFC/Rep of DW & CE and Min Def/E-in-C. Discussion will only be record in minute to be signed by both the departmental representative

5. The procedure detailed above is intended to finalize controversial cases by personal contracts as far as possible. Correspondence in respect of such cases may be resorted to only where necessary under the existing regulations.

This supersedes Routine Instruction No 582 of 1990.

CHAPTER –III

ROUTINE INSTRUCTIONS NO 508/2008
PREPARATION OF BUDGET

1. Various Budget reports shall be prepared in manners and sequence as spelt out in the Appendix 'G' to MES Regs keeping in view also the progress for the formulation of "National Defence Plan and supporting explanatory memo, shall as far as possible be furnished with the estimates as required in the para-4 of the Min of Fin ^ Planning memo No. MF (EC-1) DP-1/82/450/1 (25) dated 25th September 1982 on the subject" Revised system of Financial Management for Defence Forces"

2. As regards Budget estimate for such inter-service organizations for which funds are not canalized through MES shall as such be prepared by the concerned GE/AGE etc. demands will be sent to the concerned inter-service organization.

This supersedes Routine Instruction No 583 of 1990.

ROUTINE INSTRUCTIONS NO 509/2008
SURRENDERS AND LAPSES OF FUNDS

1. Late surrenders of funds and lapses continue to occur in spite of various orders and instructions issued from this HQ from time to time. A brief summary of some of the important instruction issued is given below for careful note and strict compliances in future;
 - a. Demand of Funds for Stores: Funds for any service will be demanded bearing in mind the availability of stores. For imported stores the funds will be demanded when the stores have arrived in the country.
 - b. Demand of Funds for Contract: Funds to meet the liabilities against a contract will be carefully decided. Demands will be limited to the amount that can definitely be utilized bearing in mind the various likely factors of delays and hold up.
 - c. Avoiding Lapses and Excesses. Executive must exercise proper financial control to ensure that amounts allotted are properly spent and expenditure is kept within authorized limits (MES Regs Para 67).
 - d. Avoiding Rush of expenditure: Careful planning must be done to avoid rush of expenditure in the last few months of the financial year.
 - e. Explanation of Variations: Variations over allotments will be fully explained in the expenditure return of the year. The approximate amounts which are attributable to each cause will also be mentioned (Para 624 (iii) of Audits Manual 1963).
2.
 - a. Fund must be definitely allotted to each service before execution is commenced. An allotment can be authorized at any time before, but not after expiry of the financial year and is intended to cover the charges to be paid or adjusted during the year. After close of financial year any unspent balance lapses.
 - b. If the allotment for a major works cannot be spent in full during the current years, the balance will be transferred to finance other services but will be surrendered to service H.Q concerned. Such surrenders should normally be made not later than 15 April.

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c. No fund will be spent uneconomically merely to prevent them from lapsing. MES Regs para-52.

This supersedes Routine Instruction No 562 of 1990.

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**MILITARY ENGINEER SERVICES
BANGLADESH ARMED FORCES**



PROVISIONAL
COMPENDIUM
OF
MES ROUTINE INSTRUCTIONS-2008

PART – VI
CONTRACTS & EXECUTION OF WORKS

PUBLISHED BY: AHQ, E IN C'S BR, WKS DTE, DHAKA CANTT.

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CHAPTER-I**ROUTINE INSTRUCTION NO 601/2008**
ENLISTMENT OF CONTRACTORS

1. It is well established that efficient and sound contractors play a vital role for carrying out quality works and satisfactory services. For certain reasons due attention has not been paid in the past for enlistment of contractors. This tendency is required to be arrested in the best interest of work.
2. Procedures for enlistment of contractors are hereby revised for the guidance of enlisting officer so that only genuine parties/persons are enlisted and periodical screening done to eliminate bad hats.
3. Application for enlistment as approved MES Contractors will be received on Form BAFW-2190 by various enlisting officers for the following categories:

Ser	Class	Contractual Limit		Enlisting Authority
		Maximum	Minimum	
(a)	(b)	(c)	(d)	(e)
1.	A	No. Limit	80.00 Lacs	DW & CE
2.	B	Tk. 500.00 Lacs	50.00 Lacs	DW & CE
3.	C	Tk. 300.00 Lacs	20.00 Lacs	DW & CE
4.	D	Tk. 70.00 Lacs	--	CMES
5.	E	Tk. 20.00 Lacs	--	GE

4. There will be no enlistment for A & B class directly. This will be done by upgradation from `C` class contractor with the approval of E-in-C. Enlisting offices are entitled to give enlistment only twice in a year in the month of Feb and Aug on the last working day. Index no of C, D, E class contractors should be allotted from the next higher office of the enlisting office.

5. Following general conditions should be fulfilled before a contractor is enlisted on the MES approved list:

- a. He should possess movable/liquid assets equal to at least a quarter of his contractual limit, which should be certified by his Bankers.
- b. He should possess immovable property equal to at least one quarter of his contractual limit, which should be certified by DC/ Collector.
- c. He should not be less than 25 years of age and he should be of sound mind.
- d. His antecedents and character should be verified through DGFI.
- e. He should have sufficient command of labour and should have well set organization and experience in his trade.
- f. He should be registered with Income Tax and VAT authorities.
- g. Preference will be given to firm whose proprietor has technical educational back ground like Degree or Diploma in Engg.
- h. One should not have more than one enlistment in different name as well as in different classes.
- j. The different members of same family should not have more than one enlistment.

6. A contractor may be enlisted for any one or more categories of works described in BAFW-2190 provided he is qualified for the particular type/types of work for which enlisted. Contractor approved for enlistment for Low Tension and High Tension Electrical Works should possess proper license issued by the government or he should employ a qualified license holder, before he is permitted to undertake these works.

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7. The contractors enlisted should deposit the following amount as standing Security Deposit and execute a Security Bond on BAFW-2350 pledging the security to the President of Bangladesh or his successor or assign in office:

Ser	Class	Contractual Limit		Amount of standing security Deposit
		Maximum	Minimum	
(a)	(b)	(c)	(d)	(e)
1.	A	No. Limit	80.00 Lacs	Tk. 5,00,000/- Tk. 4,00,000/-
2.	B	Tk. 500.00 Lacs	50.00 Lacs	Tk. 2,50,000/- Tk. 2,00,000/-
3.	C	Tk. 300.00 Lacs	20.00 Lacs	Tk. 1,00,000/-
4.	D	Tk. 70.00 Lacs	--	Tk. 30,000/- Tk. 50,000/-
5.	E	Tk. 20.00 Lacs	--	Tk. 10,000/- Tk. 25,000/-

(The amount shown in **BOLD** proposed in MES Regulations 2008)

8. Contractors enlisted with one DW&CE/CMES/GE will be permitted to tender in all MES formations. The list of contractors will be sent down to GEs/AGEs with periodical amendments as necessary.

9. For enlistment of Foreign Firms refer to RI 601/2008.

10. Special conditions for enlistment of various classes of contractors are given below:

a. Class-A (From 80.00 Lac to No Limits): All prospective class-A contractor should have:

- (1) Executed minimum of five works each costing more than Tk.100.00 lacs as class B contractor in MES (Preferably).
- (2) Stayed in class B for minimum period of five years.
- (3) Executed works of aggregate cost of Tk. 500.00 lacs.

- (4) An independent respectable office with telephone, fax, e-mail.
- b. Class-B (From 50.00 Lac to 500.00 Lac): All prospective class-B contractors should have:
- (1) Executed a minimum of five works each costing more than Tk. 50.00 lacs as class-C contractor in MES (preferably).
 - (2) Stayed in class-C for a minimum of five years.
 - (3) Executed works of aggregate cost of Tk. 300.00 lacs.
 - (4) An independent office with telephone.
- c. Class-C (From 20.00 Lac to 300.00 Lac): All prospective class-C contractors should have:
- (1) Executed a minimum of five works each costing more than Tk. 20.00 lacs as class-D contractor in MES (Preferably).
 - (2) Stayed in class-D for minimum of three years.
 - (3) An independent office with telephone.
- d. Class-D (up to 70.00 lacs): All prospective class-D contractors should have:
- (1) Executed minimum of five works each of Tk. 5.00 lacs as class-E contractor in MES (Preferably).
 - (2) Stayed in class E for minimum of three years.
- e. Class-E (up to 20.00 lacs): All prospective class-E contractors should have:
- Executed minimum of five new works each costing Tk. 1.00 lac preferably in Govt Deptts in the name of firm to be enlisted.

11. **MT and T&P** Following MT, T & P, Machinery, equipment and manpower are required for A, B, C, D & E Class enlistment.

Ser	Name of MT, T&P and others	Class of Contractor				
		A	B	C	D	E
(a)	(b)	(c)	(d)	(e)	(f)	(g)
1.	Road rollers	3	2	1	-	-
2.	Concrete mixers	3	2	1	-	-
3.	Concrete mixers without Hoper	8	6	1	1	1
4.	Vibrators	16	12	1	1	1
5.	Cube making and slump test apparatus	8	6	4	1	1
6.	Steel shuttering and scaffolding	1000 sqm	600 sqm	400 sqm	200 sqm	100 sqm
7.	Generators	4	2	1	-	-
8.	Motor pumps	10	6	4	2	1
9.	Trucks, tractors, trolleys and dumpers	10	6	4	-	-
10.	Pick ups	6	4	2	-	-
11.	Grinding machines	10	6	4	1	-
12.	Theodo lites and Levels	6	4	2	-	-
13.	Water Browsers with sprinklers	6	2	1	-	-
14.	Sieves and screens with weighing balance.	4	2	1	-	-
15.	Small work shop	4	2	1	-	-
16.	Godown/suitable store yard	4	2	1	1	1
17.	Graduate engineer	5	2	1	-	-
18.	Diploma engineer	10	4	2	2	1

12. **Confidential Record of Contractors.** Personal confidential files of contractors will be maintained by enlisting officers. Enlisting officers will maintain a "Register of Record of Contractors". This Register should contain particulars of the contractors his record of tendering, details of contracts executed by him and other useful information. To achieve uniformity in its maintenance throughout MES, the register will be maintained in accordance with the following instructions:

- a. Allow a few pages for recording General Instructions Notes for preparation and maintenance of the Register.
- b. Allow sufficient pages for Alphabetical Index.
- c. For each contractor, allow sufficient pages to record:
 - (1) Particulars of contractors.
 - (2) Record of tendering and
 - (3) Details of contracts executed.

13. **Guidance for Register.** The following forms are given for guidance in the preparation of the Register:

- a. **Page -1** COVER CONFIDENTIAL
MILITARY ENGINEER SERVICES
Office of the
RECORD OF CONTRACTORS

- b. **Page -2** GENERAL NOTES
 - (1) The register will be maintained by the Enlisting Officer to record the particulars and activities of each contractor enlisted by him. The information contained herein will be entered by an officer/ under the supervision of an officer and will be classified as confidential.
 - (2) The record will be kept in the serial order in which the contractors are enlisted.
 - (3) The first page of each entry should give the particulars of the contractor as extracted from the completed BAFW-2190. Subsequent pages should give particulars such as tenders submitted, details of contracts carried out etc.

(4) **Record of Tendering.** The object is to provide a record of how contractors are tendering so as to ensure that only active contractors are kept on the MES approved lists. The following information will be indicated by symbols:

- (a) Contractor invited to tender shown thus A
- (b) Tenders received shown thus B
- (c) Tender accepted shown thus C

(5) The details of contracts executed will be compiled from the confidential reports rendered by officers operating the contracts.

c. **Page- 3** **PARTICULARS OF CONTRACTORS**
 [See General Note (3)]

- (1) Index No.
 - (2) Name of Contractor
 - (3) Address-Head Office
 - (4) Branch Office (if any)
 - (5) Class
 - (6) Categories of work for which enlisted
 - (7) Partners, if any
 - (8) Partners/Person authorized to sign contract documents (Copy of power of Attorney/Articles of Association of limited Firms to be recorded here).
 - (9) Related to
- | | | |
|-----------|------|----------|
| Index No. | Name | Relation |
|-----------|------|----------|

d. **Page -4** **RECORD OF TENDERING**
 [See General Note (4)]

INDEX NO			NAME		
Ser	Contract No	Tender	Serial No.	Contract No.	Tender
(a)	(b)	(c)	(d)	(e)	(f)

e. **Page -5** DETAILS OF CONTRACTS EXECUTED
[See General Note (5)]

INDEX NO			NAME		
Ser	Contract No	Brief Description of work	Value of Contract	Period during which work carried out	Organization
(a)	(b)	(c)	(d)	(e)	(f)

Supervision	Punctuality	Quality of work	Official work
(g)	(h)	(j)	(k)

14. **Suspension, Removal and Blacklisting of Contractors.**

a. **Suspension of contractors.** The suspension of a contractor for a stated period not exceeding one year may be ordered as disciplinary measure to express dissatisfaction with comparatively minor technical offences with the object to bringing the contractor to a better state of mind. But this period will be 2 (two) years in case of completing any job/ work under penalty and 3 (three) years in case of completing any job/work under risk & cost. A contractor will also be suspended on the institution of criminal proceedings against him in a Court of Law. The enlisting officer has to inform the contractor under a confidential cover and state reasons for doing so in office file. No tenders will be issued to a contractor during the period he remains suspended. He must, of course, be allowed to continue the execution of work which he may have obtained prior to his suspension.

b. **Removal of Contractors.** The enlisting officer may remove a contractor from the list of Approved Contractors for serious technical delinquency just as giving materially false particulars at the time of enlistment, being persistently late in the return of tenders, failures to secure a contract either through not bidding or tendering too high in a number of cases or over a period of time and frequent suspensions etc. No reasons are required to be stated for the removal of contractor.

c. **Blacklisting of Contractors.** Blacklisting is reserved as a punishment for other than technical offences such as fraud, and for political reasons. It is controlled by the Ministry of Defence which undertakes the responsibility of informing other Government Departments. The contractor will be informed by the Ministry. The

contractor convicted by a Court of Law or by a special Tribunal will also be blacklisted by the Government of Bangladesh. Convicted contractors will be reported through Engineer channels to the DW & CE. Blacklisting may be recommended for reasons other than conviction by a Court of Law or by a special Tribunal. The appropriate examples are:

- (1) Submitting of tenders in such a way that irregular practice is suspected.
- (2) Irregular contacts with officers or subordinates of the MES.
- (3) Cheating and bad treatment with labour.

15. **Screening of Contractors.** With a view to keep only good contractors on MES approved lists, the lists should be reviewed periodically by the enlisting officers and bad contractors screened out and removed. Examples fit for removal by screening are:

- a. Contractors who habitually run away from jobs not to their liking.
- b. Contractors found by experience to be inefficient.
- c. Contractors who do not either apply for tenders or do not obtain work for a period of 5 years.
- d. The antagonistic type who are usually trouble makers and litigation makers. On the other hand good contractors who prove their worth should be encouraged by enhancement of their limit provided they fulfill all conditions.

16. If any tenderer /supplier engages in corrupt, fraudulent, collusive or coercive practices action against him will be taken as per PPR-2008 rule 127.

This supersedes Routine Instruction No 642 of 1990.

ROUTINE INSTRUCTION NO 602/2008
ISSUE OF TENDER TO FOREIGN FIRMS

1. International competitive tenders will only be called for when local firms lack of necessary expertise in implementing the work.
2. All possible measures will be adopted in future to safeguard the interests of Government. Following conditions should be fulfilled before foreign firms are considered for enlistment or tenders issued to them:
 - a. A branch in Bangladesh must be established.
 - b. The firm must be registered with Registrar of Companies in Bangladesh.
 - c. An account must be opened with a Scheduled Bank in Bangladesh.
 - d. Necessary security clearance has to be obtained through DGFI.

This supersedes Routine Instruction No 600 of 1990.

ROUTINE INSTRUCTION NO 603/2008
RELEASE OF STANDING SECURITY DEPOSIT
TO A CONTRACTOR

1. Since a contractor borne on the approved list of MES contractors of any GE, CMES or DW & CE can tender for a work in any other MES formation, on removal/withdrawal of his name he has to wait for months in some cases more than a year, to have his Standing Security Deposit released. Reason for this delay is that under the existing procedure NDC submitted by him has to be certified by every U.A.

2. To expedite release of the Standing Security Deposit following action will be taken:

a. On receipt of No Demand Certificate from the contractor, the formation on whose list his name in borne, will initiate a letter to list `B` less DW & CEs stating that the contractor has asked for release of his Standing Security Deposit and has furnished NDC which has been kept on record, requesting them to intimate if any Government dues are outstanding against him in the Contractors ledgers with their UA's.

b. The recipient of the above letter viz, CMES/GE/AGE will initiate action on BAFW-451 entering the name and full address of the contractor in part `A` and scoring out part `B` ask his Unit Accountant to verify and show in Part `C` any Government dues outstanding against the contractors. If none, he will certify to this effect under his signature. The recipient on receipt of the NDC from his U.A will also sign it and forward it to the initiating authority which has called for the information within 30 days of the receipt of his letter. The limitation of 30 days prescribed heretofore is laid down with due consideration to this process of verification involved. All concerned should adhere to the period laid down above and if for any unavoidable reasons, longer period is likely to be involved, a report to this effect will be made to DW & CE'S, with copy to originator, stating reasons for the delay. If DW & CE'S is convinced with the reasons he will condone this period.

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c. The initiating authority i.e the authority on whose approved list the contractor is/ was borne will attach the NDCs received to the original NDC furnished by the contractor and forward all of them under a registered cover to the SFC (W) concerned for his concurrence to the release of the security. Security Deposit will be released by the pledge immediately the concurrence of the SFC (W) is received.

This supersedes Routine Instruction No 601 of 1990.

μᵛᵛK	Pr³ dg©	Pr³ i aiY	weeiY I UvKvi mᵛᵛv
6	ᵛᵛR - 6	AvšRᵛZK μq	†Kv†Uk†bi c0††bi gva††g wefvR† (divisible) cY† mᵛᵛM0 AwaK cwiᵛᵛ†b (in bulk) msM0ni ††††† Ab††††† Á††††† Rb†† `wjj (SRFQ) (th ††††† gj†††††)
7	ᵛᵛKDiR	Af†††††/ AvšRᵛZK μq	cwU I hšcᵛwZ mi eiᵛn Ges ms†††††bi ††††† c0K-†††††Zᵛ wba†††††Yi `wjj (PQS) (UvKv 150.00 ᵛᵛᵛᵛ qb gj†††††bi D†††††)

2| Kvhᵛ††††† t††††† tmev

1	ᵛᵛWneD-1	Af†††††/ AvšRᵛZK μq	†Kv†Uk†bi gva††††† Kvh© mᵛᵛᵛ†††††bi ††††† Ab††††† Á††††† Rb†† `wjj (SRFQ) (UvKv 0.50 ᵛᵛᵛᵛ qb chš-†††††bi μ††††† Rb††)
2	ᵛᵛWneD-2	Af†††††/ μq	mᵛᵛᵛZ A_ev Dᵛšᵛᵛ `ic†††††i gva††††† Kvh© mᵛᵛᵛ†††††bi ††††† `ic†† `wjj (STD) (UvKv 10.00 ᵛᵛᵛᵛ qb chš)
3	ᵛᵛWneD-3	Af†††††/ μq	Dᵛšᵛᵛ `ic†††††i gva††††† Kvh©mᵛᵛᵛ†††††bi ††††† `ic†† `wjj (STD) t c0K-†††††Zᵛ wba†††††Yi e††Z†† (UvKv 350.00 ᵛᵛᵛᵛ qb chš)
4	ᵛᵛWneD-4	Af†††††/ μq	Dᵛšᵛᵛ `ic†††††i gva††††† wbgᵛᵛ Kvh© A_ev ms†††††bi bKkv `Zix I mᵛᵛᵛ†††††bi ††††† `ic†† `wjj (STD) (UvKv 350.00 ᵛᵛᵛᵛ qb gj†††††bi D†††††)
5	ᵛᵛKDWneD-4	Af†††††/ μq	Kvh©mᵛᵛᵛ†††††bi ††††† c0K-†††††Zᵛ wba†††††Yi Rb†† `wjj (SPD) (UvKv 350.00 ᵛᵛᵛᵛ qb Gi D†††††)
6	ᵛᵛWneD-5	AvšRᵛZK μq	enr Ges R††††† Kvh©mᵛᵛᵛ†††††bi ††††† `ic†† `wjj (STD) (UvKv 350.00 ᵛᵛᵛᵛ qb Gi D†††††)
7	ᵛᵛKDWneD-5	AvšRᵛZK μq	Kvh©mᵛᵛᵛ†††††bi ††††† c0K-†††††Zᵛ wba†††††Yi Rb†† `wjj (SPD) (UvKv 350.00 ᵛᵛᵛᵛ qb Gi D†††††)

3| **ewewĒK Ges tckvMZ tmev**

1	wcGm-1	Af`šixY	mvgwRK tmevgj K (Community Services) msMvb wbeP#bi t#t# c#ve `wL.tj i Ab#iva m#nj Z `wj j (RFP)
2	wcGm-2	Af`šixY	Gb wR l wbeP#bi t#t# c#ve `wL.tj i Ab#iva m#nj Z `wj j (REP)
3	wcGm-3 wcGm 4	Af`šixY	t_vK Pw ³ (Lump-sum) A_ev mgq wfwĒK (Time-based) ew ³ cimgkR wbeP#bi t#t# c#ve `wL.tj i Ab#iva m#nj Z `wj j (RFA)
4	wcGm-5	Af`šixY	cimgkR c#Z#vb wbeP#bi t#t# c#ve `wL.tj i Ab#iva m#nj Z `wj j (SRFP) (Simple t_vK Pw ³ UvKv 10.00 wgwj qb ch#)
5	wcGm-6	Af`šixY	cimgkR c#Z#vb wbeP#bi t#t# c#ve `wL.tj i Ab#iva m#nj Z `wj j (SRFP) (Simple mgq wfwĒK UvKv 10.00 wgwj qb ch#)
6	wcGm-7	Af`šixY	cimgkR c#Z#vb wbeP#bi t#t# c#ve `wL.tj i Ab#iva m#nj Z `wj j (SRFP) R#lJ l t_vK Pw ³ UvKv 10.00 wgwj qb Gi D#x#)
7	wcGm-8	Af`šixY	cimgkR c#Z#vb wbeP#bi t#t# c#ve `wL.tj i Ab#iva m#nj Z `wj j (SRFP) R#lJ l mgq wfwĒK Pw ³ UvKv 10.00 wgwj qb Gi D#x#)
8	wcGm-9 wcGm 10	AvšR#ZK	t_vK Pw ³ (Lump-sum) A_ev mgq wfwĒK (Time-based) ew ³ cimgkR wbeP#bi t#t# c#ve `wL.tj i Ab#iva m#nj Z `wj j (RFA)
9	wcGm-11	AvšR#ZK	cimgkR wbeP#bi t#t# c#ve `wL.tj i Ab#iva m#nj Z `wj j (SRFP) (t_vK Pw ³ - th tKvb gj`gvtbi)
10	wcGm-12	AvšR#ZK	cimgkR wbeP#bi t#t# c#ve `wL.tj i Ab#iva m#nj Z `wj j (SRFP) (mgq wfwĒK Pw ³ -th tKvb gj`gvtbi)
11	wcGm Gb	AvšR#ZK	cimgkR wenxb tmev M#t#Yi t#t# c#ve `wL.tj i Ab#iva m#nj Z `wj j (RFP) (th tKvb gj`gvtbi)

This supersedes Routine Instruction No 611 of 1990.

ROUTINE INSTRUCTION NO 605/2008
PROCEDURE TO CONCLUDE/
PREPARATION OF CONTRACTS

1. On receipt of Admin Sanction and allotment of funds for works, Services, the engineer Officer in whose contractual power Admin Sanction falls will decide as to who will conclude contracts for various items of works/services of Admin Sanction. Proforma 'A' given in Annex 'A' to this RI will be issued at the earliest.
2.
 - a. In case, the E in C delegates his power to DW&CE's to conclude contracts the DW&CE concerned will do so with financial concurrence of the E in C.
 - b. Under sub delegation of financial power E in C will exercise full power regarding Procurement of Works, Procurement of Goods and related Services, Procurement of Services as Head of the Procuring Entity (HOPE).
 - c. Under sub delegation of financial power the following authority will exercise power of concluding/acceptance of contract as under:
 - (1) DW& CE's upto 1 (One) crore as Head of Department.
 - (2) C'sMES upto 15 Lac as regional head (Category-1).
 - (3) GE upto 7.50 Lac as office head in the district (Category-2).
 - (4) Indp AGE up 3.00 Lac as office head of Upzilla/Thana (Category-3)
3. Proper care must be exercised in the preparation, typing and scrutiny of the contract documents so that mistakes that are liable to create loopholes and lead to disputes with contractors, are avoided.
4. In order to keep a complete record of preparation of contracts a register should be maintained in each office in following form:

Ser	CA No. and year	Description of works	Type of contract
(1)	(2)	(3)	(4)

Name of individual who drafted the contract with date	Name of Officer who checked the contract in details with date	Draft approved by CMES/GE/SO1 dated initials	Remarks
(5)	(6)	(7)	(8)

5. The following points should be kept in view:
- a. Select the appropriate form of contract.
 - b. Confine the works to those included in the PE/Administrative Sanction.
 - c. Do not vary the specifications administratively sanctioned except through an authorized deviation.
 - d. Prepare a Stores Statement (this is not part of the contract, but is most essential) and arrange stores in advance.
 - e. Give preference to conclusion of one contract against one Administrative Sanction. This would make payments and accounting simpler. Contracts can, however, be concluded for independent units or set of units of a project, but not as a routine.
 - f. Do not exceed your powers of acceptance. Do advertise tenders as mentioned in RI 606/2008.
 - g. Ensure that contract sum remains within the Administrative sanction plus permissible limit.
 - h. The specifications are contained in the components not in the contract, e.g MES Schedule of Rates, and or drawings need not be repeated in the contracts. Only particular specifications are to be added.
 - j. Do not alter the printed forms without the approval of CPTU.
 - k. Do not conclude contracts with uncertain liability. This is irregular.

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- l. Refer the contracts involving foreign exchange to your DW&CE as it has to be cleared through Ministry of Finance Military (Works).
- m. Obtain prior Financial concurrence where needed.
- n. Take particular care of special type of contracts:
 - (1) Tube well water supply contracts must be given to reputable Well Boring Firms who can do both boring and the installation of pumping sets.
 - (2) In suitable contracts for specialized works, advantage will be availed of technical knowledge of specialized firms by asking them to submit their own design and tender as turnkey job.
- p. Prepare sufficient copies for distribution to CMES/FC/ GE/ SDO/ UA Contractor.
- q. Give the Contract agreement serial no.
- r. It should be ensured that the contractor who is being awarded a contract contractor has deposited security in accordance with the rules laid down in PPR-2008.
- s. Standing security deposit of MES enlisted contractors will be governed as per RI 603 read in conjunction with paras 428 to 440 of MES Regulations.

This supersedes Routine Instruction No 633 of 1990.

PROFORMA – A

Name of work.....

Administratively approved vide No.....

Dated..... for Tk.....

Ser	Item of work	Cost	CA to be concluded by	Remarks
(a)	(b)	(c)	(d)	(e)
1.	Site clearance			
2.	a. Building including internal services b. Extra depth of foundation c. Piles			
3.	Storm water and surface drainage			
4.	External Services: (a) Water Supply (b) Electric Supply (c) Roads/Footpath (d) Gas Supply (e) Sewage disposal			
5.	Furniture			

No.-----

DW&CE/ CMES

Dated -----

ROUTINE INSTRUCTION NO 606/2008
ADVERTISEMENT FOR TENDERS

weÁvcb t

1| cY` I msiké tmev, KvhoI tfsZ tmev Ges epxewEK I tckvMZ tmev mtqi Rb` mqKvix, wciwG 2006 aviv 40 Abynvti, tñI gZ, cOK-thvM`Zv ev Zvuj Kvfy³i Avte`b ev `icI Avnevb Ges AvMðe`³KiþYi Abþiva m³sj Z weÁvcb mi vmi cKvk Kwi te|

2| mqKvix Dnvi ewlR mq cwi Kíbvq Ašf³ Avek`Kxq mqKvh³m³úv`þbi Rb` weÁvcb c0vtbi tñI wbæwY³ c×wZ Abyni Y Kwi tet

K| cOK-thvM`Zv, Zvuj Kvfy³KiY. `icI ev AvMð e`³KiþYi Abþiva m³oj Z weÁvcb evsj vt`þki Af`šþi eúj cPwi Z KgctñI GKwU evsj v Ges GKwU Bsti Rx msev`cñI cKvk Kwi tZ nBte;

L| mqKvix weÁvcb c0vtbi Rb` myew` Z Ges meRbMðn` eúj cPwi Z RvZxq msev`cñI wbePþbi tñI mZKZvi mnwZ wePvi-wetePbv c0qvm Kwi te;

M| RvZxq chñq weÁvcb c0vtbi AvZwi³ wmvte wciwAvi 2008 Zdmj -2 G ewY³ mtqi tñI XvKvi ewnti KvhpZ tKvb mqKvix eúj cPwi Z meñak `þw AvÁwuj K ev `vbxq `wbK msev`cñI ci ci meñak 2 (`þ) w`þbi Rb` weÁvcb cKvk Kwi tZ cwi te;

N| weÁvcb cKvtki Zwi tL msiké msev`cñI GKwaK ms`riY cKwkZ nBtj , mqKvix D³ ms`riYi c0ZwU KwctZ msiké weÁvcb cPvi i wðqZv weavb Kwi te;

O| hw` weÁvcb e`q eúj cPvii tñI erav`fc nq, Zvrv nBtj mqKvix weÁvcb AvKvi nvm Kwi evi wclqU wetePbv Kwi tZ cwi te Ges eúj cPvi I `QZv wðwZ Kwi evi Rb` AwaK msL`K msev`cñI Dnv cPvii e`v Kwi tZ cwi te;

P| weÁvcb cKvtki m½ m½ cOK-thvM`Zv `icI ev c0ve `wj AvMðx Avte`bKvix ev `icI`vZv`i wBKU weZiþYi Rb` c0Z i wL tZ nBte;

Q| weÁvcb cKvtki ci hw` cieZñZ D³ weÁvcb cwi eZB ev mstkvab Kiv nq, Zvrv nBtj ceZP weÁvcb th th msev`cñI I I tqemvBtU cKvk Kiv nBqwj D³ cwi eZB ev mstkvab tmB GKB msev`cñI I I tqemvBtU cPvcKvtki e`v MðY Kiv tkq nBte|

R| AvnYvb m³oj Z mKj weÁvcb mqKvixi I tqemvBtU hw` _vtK, cKvk Kwi tZ nBte; Ges

S| mqKvix, wciwAvi 2008 Zdmj -2 G Duj wLZ ev miKvi KZR mgq mgq wbañi Z gj`mxgvi EþaY³ mtqi Rb` `icI ev c0ve AvnYvb m³oj Z weÁvcb wciwJBD Gi I tqemvBtU cKvtki Rb` tc0Y Kwi te|

3| tKvb mq Kvth³ AskMðþYi mþhvM AvšRwZK Avte`bKvix, `i`vZv I ciwgrt`i Rb` Aewi Z Kiv nBtj, tmB tñI tKvb Bsti Rx msev`cñI ev AvšRwZK fte eúj cPwi Z tKvb

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cKvkbrq, ev RvwZmsN Dbq b KgmPxi cKvkbrvi tWfj vctgU tMBUI tq gvtK⁸ Ges cQvRbtefta, ersj v⁸ tk Aew⁻Z ⁸et⁸ vkK ewYwR⁸K wgbmgfn ev w⁸et⁸ tk ersj v⁸ tk ewYwR⁸K wgbmgfn cPvi KwitZ nBte|

4| Af⁸ŠtY I AvŠRwZK mtqi weÁvcb cKv⁸tki t⁸ŋt⁸ŋ, μqKvix weÁvcb cKv⁸tki Rb⁸ w⁸c⁸Avi 2008 Zdimj -2 G w⁸ba⁸ŋi Z mgqm⁸gv Abj⁸ni Y Kivi w⁸el q⁸U w⁸bw⁸ŌZ Kwit⁸te|

5| Zvwj Kvf⁸ŷ³, cŌK-t⁸h⁸M⁸Zv, ev ⁸ic⁸Ŋ Avnevbc⁸Ŋ Ges AvM⁸ŋ e⁸ŷK⁸it⁸Yi Ab⁸ŋi va m⁸ŋj Z weÁvcb cKv⁸tki t⁸ŋt⁸ŋ w⁸c⁸Avi -2008 Zdimj -10 (Schedule-X) G cŌ⁸É QK Abj⁸ni Y Kwit⁸Z nBte|

This supersedes Routine Instruction No 613 of 1990.

ROUTINE INSTRUCTION NO 607/2008
ISSUE OF TENDER FORMS AND OTHER
CONTRACT DOCUMENTS

1. With reference to the rules in paragraph 386, Regulations for the MES, tenders will be issued to contractors borne on the approved list of the MES or other Government Departments having security clearance from DGFI, considered suitable by the officer issuing the tenders.
2. Each competitor will be supplied with specifications and such drawings as may be considered necessary together with bills of quantities for the work/service.
3. All specifications and drawings supplied to competitors must be returned to the Accepting Officer at the time and date appointed for the opening of tenders.
4. When tenders are invited for contracts based on bills of quantities or Schedule of prices one envelope of suitable size must accompany the tender documents under dispatch to competitors. This envelop should be endorsed as under:

Tender (short title of work) & Bills
of Quantities

Designation & Address of
Accepting Officer

To be delivered not later than
(Time & Date)

5. The envelope in which the tender documents are dispatched to the competitors will be endorsed as under:

Tender and Bills of Quantities
Name & Address of Competitors

This supersedes Routine Instruction No 645 of 1990.

ROUTINE INSTRUCTION NO 608/2008
OPENING OF TENDER &
TENDER EVALUATION COMMITTEE (TEC)

Refs:

- A. Defence Services Regulation for the MES Paragraph 388
- B. Rule-7 of PPR 2008.

1| `icT D`yB KiY KugWJi gva`tg `icT D`yB Kwi tZ nte| thLvfb µqKvix KvHf q c`vnb ev ZrKZR ¶lgZv c`B Ab` tKvb KgRZPev µqKvix KvHf q c`vntbi wæ ch`tqi tKvb Abtgv` bKvix KZP¶, t¶¶tgZ, w`cAvi 2008 Zdimj -2 (Schedule-11) G D`j wLZ m`m` i mgS`q `icT ev c`ve D`yB KiY KugWJi MVb Kwi te|

2| GgBGm Gi mKj cKvi cZ`KvRi Pw`cT w`cAvi -2008 Gi wewa 8, 9 Ges 10 Abhvx m`uv` tbi w`gtE (TEC) MVb I Abtgv` tbi t¶¶t tmbvm` i, B Bb w`i kvLv, cZ`cwi` Bi cT bs- 600/w`cAvi -2003/B-6 Zwi L 27-05-2008 (mgq mgq mstkwaz) Gi c`E bwiZgvj v AbmiY Ki tZ nte|

This supersedes Routine Instruction No 620 of 1990.

ROUTINE INSTRUCTION NO 609/2008
TIME GRANTED IN CONTRACT AGREEMENT

1. Cases are occurring in which accepting officer's are specifying in contract documents completion time, which is impracticable. This is apt officers to lead to poor workmanship by the contractors and to leniency by the MES staff with regard to the workmanship under the plea of urgency.
2. Under no circumstances will the desire of the user for rapid execution be allowed to override the paramount importance of sound and satisfactory construction. Should the user demand that a work be completed within a time, which for engineering or other reasons is impracticable, he must be so informed in writing and indication given of the time the work will actually take.
3. Time stated in contract documents must be fair and reasonable to the contractor taking all factors affecting the physical progress of the work into account. On the other hand, it should not however be longer than is necessary to ensure that the work can be executed to the full standard called for in the specification.

This supersedes Routine Instruction No 614 of 1990.

ROUTINE INSTRUCTION NO 610/2008
VARIATION ON CONTRACTS

1| **cŕY'i AwZwi³ mieivn Ges cŕiveE³ μqŕ³ k t** gj mieivnKvix ev wKv³ vi tK mgag³ cY³ I mskó tmevi AwZwi³ mieivtŕni Avt³ k, A_{ev} cY³ ev Kvth³ cŕiveE³ μqŕ³ k cŕvtbi tŕŕt³ wæewY³ mKj kZ³ cŕZcvj b Kwi tZ nBte|

K| Pw³ gj³ w³ cŕicAvi 2008 Gi Zdŕmj -2 G ewY³ gj³ mŕgv AwZμg Kwi tZ cwi te bv, Zte gj³ hvPvB Kwi evi ci D³ gj³ ZLbi μqKvixi tŕŕt³ mŕeavRbK nBtZ nBte;

L| AvBb I wewagvj vq wba³ Z kZ³ cvj b Ges weKí μq c³ wZmgŕni Avek³ KZv³ K tKvb Dcv³ q cwi nvi Kwi evi D³ t³ k³ mŕgvM³ Pw³ ev μqŕ³ k tK ŕŕz³ a³ ŕŕ³ a³ msL³ vq Ges gj³ mŕgvq wef³ Kwi qv A_{ev} Pw³ ev³ evqbt³ K Kwi g cte³ A_{ev} mve-K³ U³ t³ wefvRb ce³ cŕiveE³ μqŕ³ k (repeat order) cŕvtbi gva³ t³ g μq Kiv hvBte bv; Ges

M| mieivn, tmev ev³ vcb mŕμvš³ w³ gvb Pw³ ew³ ZKiY, hw³ cŕZ³ thwM³ Zvgj K μq cŕμq Abj³ ni Yμt³ gj Pw³ m³ úw³ Z nBqv³ v³ tK|

2| **tŕw³ tqkb Awŕ³ ev AwZwi³ Kvh³ k Rvix t**

K| ev³ e Ae³ vi cwi t³ cŕŕ³ tZ cwi Kí bv, wWRvBb A_{ev} web³ v³ tmi cwi eZ³ B³ R³ bZ Kvi tY Kvth³ mst³ hvRb ev w³ tqvRb, cK³ t³ i m³ vavi Y e³ w³ B I tŕŕZ mŕgvbvi g³ t³ a³ mŕgv³ x³ v³ Kv m³ v³ t³ ŕŕŕ, Kvth³ bZ³ b AvB³ tUg Aš³ f³ mn cwi gvYMZ ew³ ev n³ tmi Rb³ μqKvix gj wKv³ v³ t³ i w³ KU nBtZ Kvh³ I tŕŕZ tmev μtqi Rb³ tŕw³ tqkb Awŕ³ Rvix Kwi tZ cwi te|

L| μqKvix, cK³ í G³ j vKvi f-M³ f³ A_{ev} cŕŕ³ b³ tŕŕZ Ae³ v Pw³ tZ ewY³ Ae³ v nBtZ D³ t³ j L³ thw³ f³ v³ te w³ fb³ z³ i n³ l qvi Kvi tY A_{ev} m³ vavi Y f³ v³ te Pw³ i m³ v³ b t³ gvZ³ v³ teK c³ ŕ³ w³ kZ ev³ t³ KZ b³ t³ n cK³ í t³ j i GBi³ fc AÁvZ Ges A³ v³ f³ weK ai³ t³ bi tŕŕZ Ae³ vi Kvi tY gj Kvth³ mgw³ B, Db³ w³ w³ avb A_{ev} m³ si ŕŕ³ Y c³ t³ qvR³ t³ b gj Pw³ tZ Aš³ f³ w³ j bv GBi³ fc tKvb bZ³ b Kvth³ Rb³ AwZwi³ Kvh³ k Rvix Kwi tZ nBte|

M| tŕw³ tqkb Awŕ³ Gi μgc³ v³ Z gj³ w³ cŕicAvi 2008 Gi Zdŕmj -2 G D³ t³ j w³ LZ mŕgvi AwZwi³ nBtj Ges D³ i³ fc Kvh³ gj Pw³ nBtZ Avj³ v³ v Kiv m³ e³ nBtj, D³ nvi Rb³ i c³ I Avn³ v³ b Kwi qv c³ K Pw³ m³ úw³ t³ bi gva³ t³ g D³ Kvh³ m³ úw³ b Kwi tZ nBte|

3| **tŕw³ tqkb Awŕ³ ev AwZwi³ Kvh³ k cŕvq b t**

K| th tKvb tŕw³ tqkb Awŕ³ Gi v³ v³ Dc³ v³ c³ t³ bi Rb³ th tKvb AwZwi³ e³ t³ qi cY³ Ges cyL³ v³ b³ cyL³ w³ ee³ i Ymn wKv³ vi w³ cŕicAvi 2008 Gi Zdŕmj -2 G ewY³ mgq mŕgvi g³ t³ a³ w³ j w³ LZ t³ b³ w³ Uk cŕv³ b Kwi te, hvn³ v³ tZ D³ mg³ t³ q w³ el q³ w³ Z³ š³ Kiv hvBtZ cv³ t³ Ges GBi³ fc t³ b³ w³ Uk w³ L³ t³ e³ v³ i tŕŕt³ wKv³ vi tKvb v³ v³ Dc³ v³ c³ t³ bi Kwi tZ cwi te b bv|

L| tfwi tqkb AWF wbaewZifc cVqb Ges`wLj Kwiz nBte t

(1) hri` cKí e`e`vcK c0qRbxq ewj qv gtb Ktib th tfwi tqkb AWF ev AwZwi 3 Kvhf`k Rvix Kiv Avek`K, Zvrv nBtj wZwb c0weZ Avf`k cVqb Kwiteb Ges D3 Avf`tk wKv`vi KZR`wLj KZ tbnUkmn c0qRbxq cwi Kí bv, m`úw Ze` KvthP thw3KZvnn AvBtUg Abjvfi AwZwi 3 KvthP cwi gvY wfwEK wmwve, cwi`k0 I Abjvfi Zwi L, j M ewn, D3 KvthP c0Z AvBtUtgi c0`wj Z BDwbU gtb`i weei Yw` AšfP Kwí qv Abjgv`bKvix KZet`Ii woku`wLj Kwiteb;

(2) KvthP minZ msuké cwi Kí bv, cwi gvY Ges bZb KvthP AvBtUgmgfni Rb` c0weZ GKK gj` cpi`f`Yi ci tfwi tqkb AWF AwZwi 3 Kvhf`k mwK I mšw RbK nBtj Ges D3 tfwi tqkb AWF ev AwZwi 3 Kvhf`k wicAvi 2008 Gi Zdmj -2 G ewYZ gj`mxgvi gta`_wKtj Abjgv`bKvix KZet`I, Aw`R`f`gZv AcP Avf`k Abjvix, Dnv Abjgv`b Kwiteb A_ev aviv 74 (5) Abjvfi Abjgv`bKvix KgRZfi cieZP avtci DavZb KgRZfi Abjgv`b M0tYi e`e`v Kwiteb|

(3) tfwi tqkb AWF ev AwZwi 3 Kvhf`k c0uqvKiYi f`f`f, D3 c0ZKiY nBtZ`i` Kwí qv Abjgv`bKvix KZet`I KZR` Dnv Abjgv`w` Z nl qv chS-mgqmxgv wicAvi 2008 Gi Zdmj -2 G ewYZ mgqmxgvi AwK nBtZ nte|

4| tfwi tqkb ev AwZwi 3 KvthP`wbaevY t

K| AwZwi 3 AvBtUtgi KvthP Rb` wbaewYZ cxwZ Abjvi Ym`tg wKv`vi`K Dnvi gj` c0vb Kwiz nBtet

(1) AwZwi 3 KvthP AvBtUgmgfni gj` Pw3i Abjfc ev GKB nBtj, D3 AwZwi 3 KvthP AvBtUgmgfni gj` cwi`kvtai f`f`f gj` Pw3i GKK gj` c0hvR` nBte;

(2) bZb KvthP th mKj AvBtUg gj` Pw3tZ AšfP wQj bv, tmB mKj AvBtUtgi GKK gj` wbaef`Yi wfwE wbaifc nBtet

(K) wKv`vi e`q-c0`j`b (cost estimate) c0E` gj` wfvRtb (price breakdown) _vKv mvtct`f, Ab`vb` AvBtUtgi Rb` gj` Pw3tZ e`eüZ c0Z`f GKK gj` (direct unit cost), (thgb wmtgU, iW, kg`i, hšcwZi frov BZ`w`i GKK gj`); ev

(L) mqKvix Ges wKv`vi Dftqi woku M0bthvM` evRvi gj` Abjvix w`f`gj` (fixed prices); ev

(M) Dc`dv (K) I (L) Gi wfwE`Z bZb KvthP AvBtUtgi c0Z`f GKK e`q wbaef`Yi Rb` wKv`vi KZR``icf` e`eüZ gvK`Avc d`v`i (thgbt Ki, I fvi`nW I gbdv) thvM Kwí qv bZb KvthP AvBtUgmgfni GKK`i wbaevY Kwiz nBte|

L| f`Kvb AwZwi 3 KvthP weci`tZ wKv`vi KZR` gj` cwi`kvtai Abjvfi minZ`vexKZ cvl bvi w`wi Z wmwve I cwi`gvf`Yi Dtb Lmn Abjgv`w` Z Q`K GKwU weei Y`wLj Kwiz nBte

Ges cvl bv cwi tkv`tai `vex wKv`vfi i avi veinK gj` cwi tkva (progress payment) c0Zte` tbi minZ AšFj Kwi tZ nBte|

M| Abtgv` bKvix KZet`li Abtgv` b e`wZti tK tKvb Ae`vtZB tKvb wKv`vi tfwi tqkb AWf ev AwZwi 3 Kvhf` tki Aaxb tKvbi fc Kvhm`uv` tbi Dt``vM MhY Kwi te bv|

N| Dc-wewa (M) Gi e`wZug wnmite Anwetj i ms`vb _vKv mvtct`li mqKvix Kvhf` q c0vb tKvb tfwi tqkb AWf ev AwZwi 3 Kvhf` tki Aaxb wbaewYZ th tKvb ktZ` Awej t`^ Kvhm`uv` b` i i` Kivi Avt` k c0vb Kwi tZ cwi tet

(1) Ri`ix wfwE`Z Kvhm`uv` b` i i` Kiv bv nBtj hw` Rbtmev (public service) weivNz nBevi ev Rieb I m`uue` ev Dftqi` qiwzi Avk`v` _vtK; ev

(2) mgq hLb gj` weteP` t

Zte kZ`_vtK th.

(K) msiké mgq chS-Abtgv` Z nq bvB cKt`i i GBi fc Kvh`gtj`i` mgc`AZ eix`i cwi gvY. wicAvi 2008 Gi Zdlmj -2 G ewYZ kZKiv nvti i gta` mwigZ _vvtKte; Ges

(L) Kvh`i`i Ae`einZ cti GB ai tbi tfwi tqkb AWf ev AwZwi 3 Avt` k cYqb Kwi qv wicAvi -2008 wewa 36 Abymvfi h_vh_ KZet`li woku Abtgv` tbi Rb` `vLj Kwi tZ nBte|

O| h_vh_ Abtgv` bKvix KZet`li Abtgv` tbi ci tfwi tqkb AWf ev AwZwi 3 Kvhf` tki Aaxb mtšw RbKfvte m`uuv` Z Kvth` gj` cwi tkva Kiv hvBtZ cvti |

P| tfwi tqkb AWf ev AwZwi 3 Kvhf` tki minZ RwoZ mgc`A Kvth` gtj`i` cwi gvY Zdlmj -2 G ewYZ gj` Pw`gtj`i` AwZwi 3 nBtj h_vh_ KZet`li KZK Abtgv` Z bv nI qv chS-D`3 Kvhf` tki Aaxb m`uuv` Ze` Kvhm`uv` b Kiv hvBte bv|

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This supersedes Routine Instruction No 615 of 1990.

ROUTINE INSTRUCTION NO 611/2008
GRANT OF EXTENSION OF TIME ON MES CONTRACTS

1. Due to implementation of PPR-2003, PPA-2006 and PPR-2008 the reason for extension of time has been mentioned in the General conditions of contract (GCC) of standard tender document (STD) for different types of tender, which shall strictly be followed.
2. The following procedure regarding extension has been followed and shall remain in force.
 - a. The contractor must apply for extension of time for which he considers it necessary.
 - b. If the GE/AGE, who is authorised to grant any extension of time, considers that the contractor's application is valid, he will give the contractor such extension of time, as he may consider justified.
 - c. In deciding whether extension of time should be given or not, the GE/AGE will take into consideration the conditions of the contract, as far as they affect the granting of extension of time.
3. In all cases where extension of time is granted, the AGE/GE will issue a formal letter to the contractor concerned in the proforma given as Annexure 'A' to this RI specifying the reason for which extension of time has been granted. A copy of this letter will be endorsed to all concern
4. The formal letter will be issued irrespective of what orders to the contractors may have been recorded in the site order book as regards suspension and/or resumption of work.
5. Where the contractor does not apply for an extension of time before the intended completion date of the contract, or where the AGE/GE considers that extension of time would not be justified, then in order to enforce the relevant rule of contract given in the GCC, copy attached as Annexure 'B' is to be given to the contractor during the currency of the contract, that is before the expiry date of the contract. Failure to do so in writing during the currency of the contract has three implications:
 - a. Penalty clause cannot legally be enforced.

- b. The contract may be cancelled by the Accepting Officer under the respective rule of GCC and this must be done in writing.
 - c. If action as per (b) above is not taken, then either:
 - (1) The contractor may stop the work in which event he will have right to be paid up-to-date.
 - (2) The contractor may continue work after the expiry date of the contract, then the contract is automatically extended (and he could take his own time over the completion of the work, as in such circumstances time is no longer the essence of the contract). No written extension of time from the GE/AGE would legally be required.
6. Engineer Officers will exercise the utmost care to see that the above three implications do not arise, and must therefore, review the position of the contract as regards its completion well before the date of completion and take appropriate action in terms of rules given in GCC of STD or similar provision in contract forms.

This supersedes Routine Instruction No 619 of 1990.

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ANNEX - A TO
R.I. NO - 611/2008

PROFORMA FOR GRANT OF EXTENSION OF TIME

To A.B. (Contractor`s name and address etc)

Sub : Extension of time – CA No.

Dear Sir,

Where under your contract (here briefly describe the contract) you are bound to (here briefly but clearly specify the condition which it is intended to partly remit e.g. to complete work by the first day of next June), I here by inform you that performance of the said condition is remitted and that in lieu of such performance you are hereby authorized to (here briefly specify the modified performance agreed to e.g. to complete the work by the last day of next July) due to (here specify reasons). In all other respects the contract is to remain in full force.

Yours faithfully,

(Signature and Designation of Officer)

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PROFORMA TO CLAIM COMPENSATION/LIQUIDATED DAMAGE

To A.B. (Contractor`s name and address etc)

Sub: Compensation for delay – CA No.

Dear Sir,

1. With reference to GCC condition no..... your CA No. of you are bound to complete the work by Please note that if you fail to complete the work by the above date, you will there by fail to fulfill the terms of the said contract.

2. I, therefore, hereby give you notice that the Government will claim liquidated damage from you in the manner mentioned in PCC of your contract (or similar clause of relevant contract).

3. Present progress of CA is _____ %

4. This is without prejudice to any other right or remedy which has accrued or shall accrue thereafter under the provision of the above contract.

Yours faithfully,

(Signature and Designation of Officer)

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ROUTINE INSTRUCTION NO 612/2008
CONTRACT WORK

1. All orders, instructions and/or notices to contractors must be given/ confirmed in writing.
2. Orders etc. by CMES will be given in a formal letter, sent to the contractor under a registered acknowledgement due post.
3. Orders etc by GE, AGE will be given in a formal letter, sent to the contractor, under a registered acknowledgement due post.
4. Orders etc. by the Engineer-in-Charge will normally be recorded in the works site order book BAFW-2160, but may be given in letter form.
 - a. A work site order Book will be opened for all Contracts.
 - b. The Work Site order Book will remain at site during working hours under the custody of SDO/SAE/Overseer responsible for supervising the work. When a full time SDO supervises a work, this book will remain in his custody.
 - c. The works Site Order book will be removed from site and safely locked each day after working hours in the nearest SDO or GE`s/AGE`s office.
 - d. All entries in the works Site order Book will be neatly made and dated by the officer giving the order and by the contractor noting the instructions.
 - e. On completion of the work, the works Site Order Book will be filed with the tender documents in the GEs/ AGEs Office.
 - f. Since no order issued on a contractor in the work site order book has any legal force unless it is signed or subsequently confirmed in writing by the Engineer-in-Charge, no order will be issued to the contractor on the folio of the work site Order Book. Unless it is signed by the Engineer-in-Charge.
 - g. Where a work under a contract is being supervised by an SAE/ Overseer Grade-II or SSAE/ Overseer Grade-I or an Assistant Engineer who is not the Engineer-in-Charge, he may, where

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necessary, prepare and order on the contractor on a folio of the Works Site Order Book and sign it as officer issuing orders at the end of the folio, but he will not actually issue the order actually issue the order the order without getting it countersigned by the Engineer-in-Charge. The latter, in token of his concurrence with the order, will countersign it in the space on the printed form between the contractor's signature and the signature of the officer issuing orders.

This supersedes Routine Instruction No 616 of 1990.

ROUTINE INSTRUCTION NO 613/2008
CONTRACTS DEFECTES LIABILITY PERIOD

1. GE/AGE to certify to the contractor the state of the work at the end of defects liabilities period which is shown on particular conditions of contract which will start after the works has been handed over to the department.
2. A detail inspection of all works will be carried out personally by the GE/AGE during the last month of the defects liability period. As a result of this inspection if any action is required for replacing any defective materials, or rectification and re-construction of any unsound work such action shall be initiated by the GE/AGE before the expiry of the defect liability period as detailed in rule 39 (29) of PPR-2008.
3. The GEs/AGEs will be held responsible for any non-compliance with these orders.

This supersedes Routine Instruction No 617 of 1990.

ROUTINE INSTRUCTION NO 614/2008
REVIVAL OF CONTRACT

1. A few instances have occurred where CsMES have terminated some contracts due to the failure of the contractors and have subsequently allowed the same contractors to carry out the work, incomplete by him. Under the conditions of the contract, the contractors were liable for delay fine and the remaining works left incomplete by them, should have been done by another agency at their risk and cost,. Instead of adopting the above course, the same contractors were allowed to complete the works under the erroneous impression that the terminated contracts were still alive.
2. Officers dealing with contracts must understand all the clauses of the contract agreement and implement these as laid down. Where a similar case arises in future, it will be ensured that no defaulting contractor is allowed to complete the remaining work when the final step for the termination of his contract has taken after fully considering the contractors capability for the completion of work even under the compensation clause.
3. Revival of a contract once terminated can only be done with the prior approval of Government of Bangladesh. Such as eventuality should not normally arise.

This supersedes Routine Instruction No 618 of 1990.

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ROUTINE INSTRUCTION NO 615/2008
REQUISITIONS

1. A requisition (BAFW-1833) is a detailed order for Minor Works and repairs on a contractor and will fully specify the work required to be done in plain language describing it in detail, where required giving sizes, areas, sketches so that the extent of the work and its exact nature can readily be understood and identified. This is necessary for the work to be supervised and checked properly. This will facilitate understanding and describing the work required to be done with a consequent ability to supervise it with a better knowledge of details of work required and the way it should be done.
2. This supersedes Routine Instruction No 612 of 1990.

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ROUTINE INSTRUCTION NO 616/2008
SPECIAL POINTS REGARDING CONTRACT DOCUMENTS

To be issued separately.

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ROUTINE INSTRUCTION NO 617/2008
PREQUALIFICATION OF CONTRACTORS FOR ISSUE OF TENDERS
AND AWARDING CONTRACTS

1. To ensure implementation of PPR-2003, PPA-2006 & PPR-2008 following procedure will henceforth be adopted for healthy competition in tendering and achieving good quality of construction at economical rates:

a. **Selection/Pre-qualifications of Contractors.** Selection/Pre-qualifications will normally be made from the approved list of MES Contractors including firms enlisted and working with other Departments and Autonomous Bodies on production of their latest credentials to prove their suitability for the type of job being tendered. In selecting contractors, the following points must receive the merited consideration of the officer calling the tender:

- (1) They should enjoy good reputation about their performance in the past. Contractors working with other department should have security clearance from DGFI.
- (2) They should have sound financial position commensurate with the type of work, and have adequate T&P, shuttering material, supervisory staff and skilled labour.
- (3) They should have adequate knowledge, experience and resources to undertake the job being tendered.
- (4) Tenders will not be issued for the same work/service to contractors related to each other.
- (5) Tenders for the same work/service to different firms owned by the same individual or group of individuals under different trade names will not be issued.
- (6) Immovable property of contractors must be checked periodically as per their enlistment to watch state interest for realization of Govt. dues as and when the occasion arises.

(7) Grouping/splitting of various items of an Admin sanction should be done intelligently to facilitate prequalification of contractors in the best interest of the work/service.

(8) Tender should normally be issued to contractors of the same enlistment category, which of course should match with the amount of work/service being tendered. In case of shortage of good contractors of a particular category, this condition can be relaxed by one step upwards.

(9) Pooling of tenders is forbidden. Suitable action will be taken against contractors found involved in any way in pooling. Similarly if it is established that pooling was done in connivance with the Accepting Officer or any member of his staff, necessary disciplinary action will be taken against the guilty persons.

(10) Past performance reports/CRs of the contractors must be consulted before issue of tender. In case these are not available with the area of his command, then the Engineer officer under whom they are presently working or have completed works in the recent past should be asked to send a written report before such contractors are prequalified.

(11) Ensure that the selected contractors are not habitual of unnecessary litigations against the Department.

2. Contractors found in the habit of under-bidding and indulging in un-sound tendering must be dealt with severely.

3. It should be noted that execution of a work & physical services/goods & related services especially in terms of quality, speed and economical rates, has direct relationship with the executing agency/contractor, and therefore the need for prequalification of contractors. Good contractors with good departmental supervision are bound to give the desired quality along with timely completion of projects.

ROUTINE INSTRUCTION NO 618/2008
TIMELY COMPLETION OF WORKS AND SERVICES

1. There is a feeling on the part of the users that the MES works are generally not completed within the time stipulated in Contract Agreements. Although it is not always possible to adhere to the specified time schedule but such cases should be exception and not a rule.

2. Following can be possible causes of delay in the completion of works:
 - a. Non-availability of site (Demolition/Auction of existing structure, non-removal of electric/water line & cutting of trees etc).
 - b. Delay in site investigation/soil analysis.
 - c. Non-availability of Govt stores to be issued under Contract Agreements.
 - d. Variation Orders.
 - e. Amendments to contract agreements.
 - f. Paucity of Funds.
 - g. Poor performance and slow progress by Contractors.
 - h. Changes made in siting, specifications, lay-out, design, scope, etc.
 - j. Faulty contracts.
 - k. Delay in completion of external services and furniture although the buildings are completed.
 - l. Delay in import of stores, machinery/plant from abroad.
 - m. Non-availability of stores from the market, which is the responsibility of the contractor.
 - n. Bad weather.
 - p. Revision of Administrative Sanction.

3. Most of the above factors are avoidable. Delays in early completion of projects cause not only frustration amongst the users but also result in loss to the State. To improve the credibility of MES, it is imperative that Executives at all levels should make all possible efforts to eschew delay in completion of works without sacrificing its quality. To do the needful, a well coordinated planning from conclusion of contract to handing over the completed works is required at all stages by all concerned.

4. To achieve this object following measures should be taken:

a. The GE/AGE concerned should ensure that the site is available and the soil tests are carried out before the contract is accepted.

b. The users tend to change the site on change of command. It is duty of the GE/AGE concerned to associate new Commander with the works/projects at the earliest. In case there is change of site, the Accepting Officer should be informed immediately.

c. The GE/AGE should ensure that all Govt. stores required to be issued are available before the contract agreement is concluded. In case there is any difficulty, the Accepting Officer should be apprised of the situation immediately for excluding such stores from the contract.

d. All CMES and GE/AGE should keep local Commanders informed of the same to avoid unnecessary interference in the execution of works.

e. In a well planned work and properly drafted contract agreement, there should be no necessity for initiation of variation orders and Amendments. These must be avoided as far as possible. In case these become inevitable then timely action should be taken for their initiation and sanction.

f. Prequalification of contractors is personal responsibility of the Accepting Officer and the staff assisting him. A good contractor is always an asset to the department. Instructions contained in Routine Instruction No. 617/2008 should be followed strictly.

g. At occasions, contracts are concluded in a great hurry which is not desirable as the same often result in faulty contracts R.I. No. 614/2008. Due time should be given for preparation of contracts.

h. In some cases, external services and furniture are not put to tendering owing to bad planning or sheer ignorance. Main building is completed but works on external services and furniture lags behind. It is, therefore, necessary that contracts for all external services are readily available as soon as the main bldg is completed.

j. Normally there should be no reason to delay the work for want of funds and revised administrative sanction. In case it becomes unavoidable, then sincere efforts should be made to get the same expedited.

k. Stores required to be imported from abroad must be made available to the contractor well in time .Similarly when certain stores are not available in the market for which contractor is responsible, alternate stores should be specified with the approval of controlling officer of the CA immediately, but the non-availability must be ascertained by the GE/AGE himself. This relaxation should not be misused to suit convenience of contractors and/or give them under financial benefit.

l. While fixing time for completion of the work in a contract agreement, bad weather and seasonal limitations likely to affect smooth progress of the work, should be catered for and extension of time for normal bad weather should not be given. Only unusual and abnormal bad weather conditions should become basis for extension of time.

5. Granting of extension of time in-discriminately can cause loss to the State as contractors feel encouraged to lodge claims against the department for payment of escalation, etc.

6. All cases in which total working days records more than 50% of the original period of the contract is granted, will be reported to this HQ. This will apply to CAs concluded by the E in C's Branch and DW & CEs.

ROUTINE INSTRUCTION NO 619/2008
QUALITY CONTROL AND SUPERVISION OF WORKS

General

1. Ability of an engineer lies in the quality of work produced by him and satisfaction afforded to the user. Evaluating the performance of the MES field functionaries and engineer executives on these standards, a lot would be finding to be lacking. This instruction is issued for general guidance of the officers and junior executive staff connected with the execution of the works but it must be remembered that there is no substitute for the knowledge acquired through personal efforts, extensive study and experience gained through keen observation and sustained efforts. For this purpose, regular study of E in C's Routine and Technical Instructions, current engineering publications and strenuous efforts to learn from seniors, colleagues and other specialists in the trade is required. It must be borne in mind that quality control is a function of strict departmental supervision and a good contractor. For the former, presence of adequate and competent supervisory staff with sufficient means/tools for exercising quality control at the site of work is essential. For the latter, the contracting authorities must follow R.I. No. 617/2008, which gives the necessary guidelines for the pre-qualifications of contractors. Without the development of quality consciousness in the minds of the supervisory staff and the contractors, nothing much in concrete terms can be achieved. Seepage, cracks in buildings and poor finish are just not acceptable. To improve our standard of construction in general and finish in particular, this R.I. will be studied in depth and then implemented at all levels without any exception.

Site Office

2. It is imperative that for all major projects, a Site Office be constructed for which provision should be made in the Project Estimate. One major reason for the supervisory staff to remain absent from the site of work is non-availability of a suitable office accn. In fact, site office should be constructed before actual commencement of the project work so that the same is supervised properly from commencement to completion.

Documents, Articles, Record etc, Required to be Kept at Site of Work

3. Following documents, articles, record etc; should invariably be kept at site:
 - a. Copy of Contract Agreement.
 - b. Complete set of drawings.
 - c. Set of Information Sheets.
 - d. MES Schedule of Rates.
 - e. Work Diary.
 - f. Site Order Book.
 - g. Time and Progress Chart.
 - h. Register for recording all field and laboratory tests and results thereof.
 - j. MES Check Sheets.
 - k. Sample board of all articles, stores, materials etc, required to be supplied by the contractor duly approved by the E in C/GE.
 - l. Store Register

Field Tests

4. It is essential that all the field tests as laid down in the contract agreement are carried out before the materials are used and work is accepted for payment. Some of the field tests with respect to concrete are laid down in T.I. No. B - 65. For this purpose, following should invariably be available at site:
 - a. Cone with platform and other accessories for slump test.
 - b. Moulds with platform and other accessories for cubes.
 - c. Graduated glass cylinder or at least a glass tumbler to test impurities in aggregates and sand.
 - d. Straight edges of size.
 - e. Hand level.
 - f. Plumb bob.
 - g. Knife.
 - h. Metal trough and weighing scale for soakage test
 - j. Thermometers.
 - k. Moisture content meter for timber
 - l. Measuring Tape.

Laboratory Test

5. Laboratory facilities are available in Material Testing Laboratory in E in C's branch, BUET, RUET, KUET, CUET. The Engineer-in-Charge should avail the above laboratory facilities nearest to their sites of work to carry out tests as required under the contract conditions and instructions issued by the E in C's Br. As most of the test reports can be forged or manipulated, Engineer-in-Charge must personally ensure that the tests are carried out properly and the results are accurate and not influenced by the contractor.

Supervision

6. a. It should be ensured that work is supervised at all stages by the executives. It should not be allowed to proceed to the next stage unless the earlier stage has been completed to the laid down standards and approved by the competent officials. The concerned supervisory staff should study contract documents including specifications thoroughly for true execution of the work on ground. It is of utmost importance that irrespective of the official working hours, the supervisory staff should remain at site as long as the contractor's labour is working.

b. It is noticed with concern that due attention is not being paid to items of the work connected with the final finish of structures. It is left entirely to the discretion of the contractors. It should be noted that the users cannot check structural stability of the building/service. The only aspect visible to him is the final finish. It will therefore be personal responsibility of CsMES and GE/AGE to ensure that work is finished as specified.

7. Items Deserving Special Attention are**a. Buildings.**

(1) **Excavation.** No excavation should be allowed in excess of requirement. If done, it will be backfilled with PCC 1:4:8 at contractor's costs.

(2) **Termite Proofing.** Termite proofing in the foundations and floors should be carried out, before pouring of P.C.C 1:4:8 through an approved agency.

(3) **DPC.** At sites likely to be flooded by run-off rainwater, it should be ensured that, DPC is provided at suitable level and

plinth/floor level adjusted accordingly. DPC should be laid strictly in accordance with specifications laid down in contract agreement and MES Schedule of Rates.

(4) **Aggregates.** Aggregates should be approved after carrying out the specified tests before the contractor is allowed to bring it at site of work. Any defective material should be rejected forthwith and got removed from the site of work. The usual answer of the field staff that the “substandard material is already rejected and will not be used” should not be acceptable to the inspecting officers.

(5) **Bricks and Masonry Work.** Every effort should be made to get the first quality bricks as per specifications given in the Schedule of Rates and contract documents. Although the presence of salts in the bricks cannot be ascertained visually, yet brick size, shape and other qualities with respect to specifications can always be checked and substandard bricks rejected. The use of bricks with efflorescence should be avoided altogether. The appearance of efflorescence subsequently on the walls should be washed thoroughly with water or diluted sulphuric acid before plastering. Patches of efflorescence appearing after plastering should also be thoroughly washed repeatedly and allowed to dry before applying `undercoats`

(6) **Wood Work and Joinery.**

(a) Timber for all wood –work and joinery should be kiln seasoned and of good quality, free from sapwood, loose/dead knots, open shakes, borer holes, rots, dote, decay and all other defects.

(b) Timber sawn to sizes as specified, should be brought at site and stacked under pressure for sun-drying and for removal of any residual moisture. The necessary certificate of the kiln-seasoning should also be obtained from the contractor. Warped components with excessive and bigger size knots should be rejected,

(c) It should also be ensured that:

(i) Preservative is used to the back of door and window frames/ chowkates as specified.

(ii) Door and window frames are fixed in plumb/level as the work proceeds to avoid gaps between walls and the frames- which later-on have to be filled with mortar. If the frames are likely to be damaged during construction, then alternatively correct size template frames during construction of walls. To avoid breaking of walls for fixing hold-fasts to the frame, one or two headers at appropriate locations on either side of opening can be laid in mud mortar to facilitate their easy removal.

(7) Steel doors/windows. Steel doors/windows and grills should be of specified standard sections (and not commercial). Welding marks should be filed smooth. Skew window frames/panels with a bad finish present an ugly appearance and should be rejected. Wire gauze frames with correct specifications should always be fixed after plastering.

Note: The quality and finish of joinery and steel doors/windows is the weakest link in our construction and must be improved.

(8) **Floors.**

(a) Terrazzo/stonolithic floors should be laid in panels as per TI-B-52 to avoid shrinkage cracks. Ugly cement patches and uneven surface should be avoided by adequate rubbing/ grinding and polishing. Skirting should also be checked for plumb uniform height and good finish.

(b) Slope in the floors and bath rooms should be particularly checked for correctness.

(9) **Concealed Services/Plumbing.**

(a) All concealed services such as under-surface water supply/plumbing joints, drain/soil pipe joints and fittings, electric cables/wire conduits etc; should be fixed before

laying of floors and plastering of walls so that no patch work occurs subsequently. All such concealed services should not be allowed to be buried unless tested satisfactorily as per tests laid down in schedule of rates and contract agreement, and duly certified in writing by the Engineer-in-Charge. Rectification of a defect later on-after completion of terrazzo/ tiles/plasterwork etc would entail heavy expenses and effort besides bringing bad name to the Department.

(b) To ensure that the overhead tanks do not overflow, float valves should invariably be provided. The overflow pipe should be taken down and not allowed to drain water on-to the roof.

(10) **RCC Works.**

(a) Shuttering should be smooth, strong and leak-proof to achieve smooth, even, without undulation, or honey-combed concrete surface.

(b) To achieve dense and durable cement concrete, Technical Instruction No. B-65 should be rigidly followed.

(c) Reinforcement steel should be thoroughly cleaned of rust, grease, oil etc; before pouring concrete.

(d) The reinforcement steel bars after placement, should not be allowed to be disturbed by the workmen during concreting which can be achieved by using planks placed over "saddles". Disturbed reinforcement bars moved close to the neutral axis of any RCC section become ineffective and do not take the stresses.

(e) Placing of copper sheet/water-bar on the roof-slab for expansion/crumple joints must be ensured before pouring concrete and not afterwards by breaking the concrete and patching it with mortar.

(11) **Roof Slab.**

(a) While laying PCC blocks/bricks for making channels for roof insulation tiles, the cement mortar falling in between the channels must be cleared as the work proceeds. Any

mortar left unremoved later blocks the flow of water and is likely to cause seepage patches on ceilings.

(b) The slope of the form work should be checked for correctness to achieve the specified slope in the finished surface of the roof slab.

(12) **Plastering.** Plastering which is an important element of the finished product should be regularly checked by the field staff at all stages to ensure correct cement/sand mix and straight horizontal/verticals and true squares in corners/edges. All buried conduit pipes should be fixed in adequately deep recesses before plastering of walls to avoid unsightly uneven patches on finished surfaces. Executives should follow `Critical Path` to avoid as far as possible breaking and repairing finished works.

(13) Curing.

(a) The importance of curing of cement plaster/ concrete cannot be over emphasized. It has been proved / through lab experiments, that lack of curing not only produce cracks in concrete but also reduces its compressive strength at 7 days by as much as 1000 lbs/ Sq in (6.895 Mpa). It is therefore of utmost importance that all newly laid concrete and plaster works are adequately cured under strict supervision. Curing can be done by one of the following universally adopted methods:

(i) Forming a pond over the concrete after it has set.

(ii) Covering the concrete with earth or straw kept wet.

(iii) Covering the concrete with wet burlaps as soon after it is placed as possible and keeping this continuously wet for as long as possible.

(b) In advance countries some of the following latest techniques are being adopted for curing, which should also be encouraged on works executed through major construction firms/ contractors of repute:

- (i) Covering with water proof paper.
- (ii) Covering with an impervious memberance applied by spraying.
- (iii) Spreading calcium chloride over the concrete.
- (iv) Steam curing
- (v) Curing by infrared radiation.

(14) **Painting.**

Specified quality paints should only be allowed to be used. Use of primer coat must be ensured on the new walls to avoid appearance of “ Efflorescence” and dark patches on the finished surface.

(15) **Cracks.**

(a) In order to avoid settlement cracks, construction should never be allowed on filled-up/built-up soils. To avoid appearance of cracks in roof slabs/beams/lintels and masonry underneath, the bed plates and supporting walls should be finished smooth. Executives should guard against contractor using scrap paper from torn cement bags. Necessary instructions for prevention of cracks are also given in technical instruction B-54.

(b) In framed-structure buildings, cracks tend to appear at junction of masonry walls with RCC structural members due to differential expansion and contraction in the two dissimilar materials. Chicken-wire-netting strips about one foot wide fixed with nails over the joints before plastering has proved successful in minimizing such cracks, In non-residential buildings, such cracks can be eliminated by providing structural members of slightly larger width than that of the walls.

(16) **False Ceilings.**

False ceilings if provided by theretofore, should have straight, even and uniform joints without any dirty impressions so as to present a good appearance. This item should invariably be left to be the last to save it from becoming dirty during construction.

(17) **External Finish.**

(a) As far as possible, the external faces, of bldg should be protected against direct rain/showers by providing adequate projections. It will minimise the seepage and dampness on the inner side of the walls.

(b) To save on the recurring maintenance cost, the external walls should be provided as far possible with permanent finish such as machine-made bricks/tile facing; white/colour cement roughcast all weather acrylic paint etc.

8. **Road Work, Hard Standing, Landing Grounds etc.**

- a. The ground should be formed to proper gradient, camber and super elevation
- b. Bottoming material should be laid to full depth and packed on edge. Interstices should be filled with spalls of the bottoming material before rolling.
- c. Honey-combed and uneven premix carpet surfaces should never be accepted. Such surfaces are likely to trap rainwater, which gradually results in “reveling” and “shoving” of the bituminous pavements
- d. Edges of roads should be protected by providing brick-on edges/ kerbstones.
- e. Measurements of all carpeting material brought on site should be recorded in the measurement books before spreading.
- f. Only the approved fillers (with approved primers) should be allowed to be used in the expansion joints. Under no circumstances ordinary bitumen should be allowed as a joint-filler.

9. **E&M.**

- a. Use of approved cables/wires, conductors and switch boards.
- b. Correct cable jointing.
- c. Protective devices
- d. All equipment should be checked for size and capacity. Checking of labels fixed on equipment is not considered sufficient.
- e. Provision of sand and bricks under cables in trenches.

- f. Provision of salt, coal and proper depth on muffler etc; for foundation of electric poles and their earthing.
- g. Overhead clearance for electric lines.
- h. Use of proper clamps for securing pipes to walls.
- j. It should be ensured that voltage and amperage of electrical lines and pressures in water supply and gas lines are tested as provided in contract agreement.
- k. Adequate slope is provided in sewage lines and same are kept clear of all blockages.
- l. When special equipment and fittings are installed, the manufactures and suppliers instructions be followed. Similarly spares be received as per contract condition.
- m. It should be ensured that earth wires are connected with G.I pipes, main switches and distribution boards through thimbles. Moreover G.I pipe for earth should be sunk at least six feet away from the nearest foundation.
- n. Wherever under-ground service lines cross roads, back filling should be done properly with full compaction to avoid, subsequent “sinking “ and settlement.
- p. Indicators, signboards, cable marker etc; should be installed at suitable spacing over under-ground services.
- q. Following tests will be carried out and their results recorded:
 - (1) Continuity of the conductors/conduit.
 - (2) Earth electrode resistance.
 - (3) Polarity.
 - (4) Operation of the switch-gears and protective devices.
 - (5) Conductivity resistance of conductors.

Inspections

10. CsMES and GEs/AGEs should carry out periodical site inspections and checks. Inspection notes should be issued and followed upto ensure that points mentioned therein are attended promptly. It is the responsibility

of senior engineer executives to teach and guide the junior site staff. present practice to learn from juniors has caused a great damage to service. Knowledge must travel down and not upwards.

11. Due care should be exercised in posting of executive staff. Principle of “Right man for the right job “must be adhered to strictly. In case, any member of the supervisory staff is found to be not matching with the responsibility entrusted to him, he would be replaced immediately with suitable individual. Only merit should be the consideration and basis for such decision. It is further added that CsMES and GEs/AGEs are normally hesitant to take necessary disciplinary action against in-efficient supervisory staff. This attitude must be got rid of. Defaulters should be given warning and efforts made to improve their output. In case the individual is considered incorrigible, then suitable disciplinary action should be taken including removal from service.

12. No building with seepage, cracks and bad finishes will be acceptable and the supervisory staff will be held totally responsible for it.

CHAPTER-III

ROUTINE INSTRUCTION NO 620
ISSUE OF STORES TO CONTRACTORS

1. It is apparent that sufficient care is not being exercised by all concerned in estimating and checking the quantities of stores issued by the MES to contractors under the Contract Agreement. Steps must be taken by CsMES/GEs/AGEs to ensure that issue of stores to contractors are strictly limited to the quantities actually required for the work.
2. To assist all concerned, the following procedure will be strictly followed in future:
 - a. The officer responsible for the preparation of Contract Documents will be responsible that the estimate of quantities of stores required to be issued to the contractor is prepared by his staff concurrently with the Contract Documents. The importance of accuracy in this estimate is stressed.
 - b. The list of stores will then be forwarded to the GE in case of contracts prepared by the E in C/DW & CE/CMES. The GE/AGE will pass this list of stores, including those for his own contracts to the Officer in charge of work.
 - c. The Officer-in-Charge of the work will be responsible that stores in excess of the quantities shown in this estimate are not issued and for this purpose, he will maintain in manuscript a statement on the enclosed proforma. The estimated quantities of different items of stores required to be issued to the contractors under Schedule `B` will be filled in at the top of the proforma in the appropriate columns for the purpose of control. All issues of stores to contractor will be entered in the lower portion of the proforma as soon as the issues, are approved by the Officer-in-Charge. When indents of stores are received for approval by the Officer-in-Charge, he will check by a reference to the proforma, if quantities previously issued are the total quantities demanded. and within the total estimated requirements. The maintenance of this proforma in an upto date condition will assist in the preparation of the statement of stores which is attached to the final bills.

d. Issue of the variation order may necessitate the revision of quantities of the stores, as originally estimated. When a variation Order is placed on a contractor, the GE/AGE will examine and decide if it involves either an increase or decrease in the quantities to be issued under Schedule 'B'. When a Change is found necessary, the GE/AGE will issue in writing to the officer-in-Charge an amendment to the estimate of stores with copy to the officer who accepted the contract, through the CMES. This amendment will be the authority on which stores upto the revised quantities may be issued. In such cases, the estimated quantities of stores entered in the proforma will be amended.

e. In cases where a demand is received from a contractor for issue of stores in excess of the total quantities, originally estimated or as amended from time to time, the demand will be referred to the GE/AGE. The total estimated requirements of the items will then be carefully re-checked and if it is found that there has been an error in the quantities originally calculated, the GE/AGE will issue an amendment in writing to the estimate of stores before authorising such further issues.

f. For all large works separate indent book of stores will be issued serially. The practice of mixing up a large number of works of different contractors in one indent book will be discontinued.

3. The estimated requirements of stores will NOT form part of the contract documents.

4. A serious view will be taken in future of any over issue of stores to contractors and the GE/AGE will be personally held responsible should they occur

5. Stores included in contracts are meant to be issued for actual incorporation in the works concerned. As such, when sheets, timber, etc, are included in contract these will not be issued for Shuttering, Centering, Scaffolding etc. The point should be made clear by inserting the following note "Stores included in this Schedule are meant to be issued for actual incorporation in the works covered by this contract. No stores will be issued for Shuttering, Centering, and/or scaffolding. These will be arranged by contractors themselves".

RESTRICTED

6. When stores specified in CA are not available with MES, supply of these can be entrusted to the contractor at rates to be decided by GE as mentioned in para 667 of MES Regulations.

7. Stores not originally included in CA and which is the responsibility of the contractor to supply, may be issued to him at the discretion of the GE/AGE Recovery will be effected at Stock Book Rates (plus custom duty and sale tax in case of imported stores) prevailing on the date of issue or the current market rates whichever is higher. Such issue of stores will require prior agreement of the contractor for the recovery rates in writing. Para 665 of MES Regs also refers.

This supersedes Routine Instruction No 635 of 1990.

CHAPTER-IV

ROUTINE INSTRUCTION NO 621/2008
PAYMENT AND RECOVERIES OF CONTRACTORS

1. The number of cases of overpayments has soared to alarming heights. This indicates:
 - a. Bad financial control.
 - b. Faulty operation of contracts.
2. The evil of overpayments can and must be eradicated. The rules and procedure already in force are so devised that if these are strictly observed No overpayments can occur. In order, therefore, to prevent overpayments, stricter financial control and observation of all the relevant rules and procedure on the subject is of vital importance.
3. It has been observed that overpayments generally result from:
 - a. Inaccurate assessment of payments on running account.
 - b. Over issue of stores.
 - c. Acceptance of below specification/materials/works.
4. A brief resume of the various important instructions on the subject is given below for strict compliance.

Payment on Running Account Receipts (RAR)

5. a. General Condition of Contracts allows monthly payments at 90% of the value of work done less:
 - (1) Cost of stores issued.
 - (2) Hire charges for T/P.
 - (3) Water charges.
 - (4) Electric charges etc.
 - (5) Amount of previous running payments/Secured advance. This gives the GE 10% retention money at all stages except where reduction in retention money is authorised.

- b. Where RARs are called for check by Cs MES, the check will be physical and NOT merely an office arithamational check.
- c. In no case will the limit of 90% payment be exceeded. This percentage applies to the value of work accepted and passed by the GE/ AGE /Engineer-in-Charge and NOT to the value of work done. No payment is to be allowed for work Not executed upon the contract specifications.
- d. Final bills which fall short of prescribed retention money call for disciplinary action. Such cases will be reported to this HQ together with statements of the SDO/Engineer-in-Charge/ Controlling officer giving reasons for the irregularity.

Issue of Stores

- 6. a. Ensure that stores are issued to contractors in small quantities commensurate with their consumption.
- b. Work diary will be used to show every days receipt consumption, and balance of stores used by the department. Items counted for by weight may be entered approximately.
- c. Contractors will be asked to maintain proper ledgers for stores issued to them to show daily receipts /issues.
- d. Cost of all stores applied, previous to the preparation of a RAR, must be recovered in each RAR.

Hire Charges

- 7. Hire Charges for Tool, plant and Machines hired to a contractor will be recovered in each RAR.

Advances

- 8. Expenditure incurred on the employment of labour or other expenditure incurred by the MES under the terms of a CA, which is debitible to the contractor, must be promptly booked in the construction accounts and the contractor ledger. Prompt recoveries will be made from the Contractor`s dues at the first available opportunity.

Secured Advances

9. Secured Advances permitted, vide para 410 MES Regulations must be booked in Construction Accounts and the Contractor's ledgers and prompt recoveries effected.

10. The rules regarding payment on secured advances and deduction there of from RAR are contained in para 410 of MES Regs. But it has been observed that different offices are interpreting the said provisions in different ways. As a result instances of over payments are occurring these days due to such wrong interpretation

11. In order to do obviate the confusion once for all it is clarified that payment made to a contractors on secured advances for materials supplied shall be recovered/ deducted in full from the next RAR Bill due to a contractor.

12. If the materials supplied by a contractor for which secured advances has already been paid remains un-consumed in full or in part while payment next RAR advances may be repeated for such un-consumed balance of materials.

13. In such circumstances a certificate will invariably be signed by GE/Indep AGE and CMES in partial modification of the certificate given in para 410 MES Regs as follows:

“Certified that the quantities of materials/timber detailed in the attached Schedule have actually been brought by the Contractor to the site of work for which secured advances has already been paid in the previous RAR and deducted the amount us fully in this RAR. The secured advances is hereby repeated for unconsumed balance of materials laying at site and that these materials (except timbers) are of an imperishable nature and are all required by the contractor for use in the work in connection with items for which rates for finished work have been included “

Expenditure Incurred at the Risk and Cost of Contractors

14. Expenditure incurred at the risk and cost of the contractor on termination/cancellation of his CA will also be booked in the Construction Account and the Contractor's ledger for prompt recovery.

Devaluation of Work

15. Occasions for devaluing work should NOT normally arise. Where however devaluation is unavoidable and work performed below specifications does not materially and structurally affect the life and strength of Building, devaluation may be done under orders of an authority if an authority next higher to the Accepting Officer in the case of AGE/GES/CMES contracts . Devaluation of E-in-C/DW & CE contracts will be done with prior approval of DW & CE. All cases of devaluation must be reported to this HQ.

Variation

16. Excess by way of variation will not exceed 15% of contract amount.

Recovery of Over Payments

17. Where a contractor disputes the recovery or does not answer notices for refunding the amount over-paid, action should be taken to refer the matter to arbitration to get an award in Govt's favour and taking it to court for getting a decree against the contractor. Irrecoverable over payments have to be written-off under sanction of the CFA. A loss Statement, together with a detailed statement of each case, should be sent to the CFA for sanction. Where a C of I is necessary and is held, copies of its proceeding should also accompany the loss Statement.

Yard Sticks

18. For assesment of progress of work for verious type of buildings yard sticks are annexed to this RI as A to R.

This supersedes Routine Instruction No 641 of 1990.

ANNEX - A TO

YARD STICK
CONSTRUCTION OF 'D' TYPE QTR (5 STORIED)
(NORMAL)

Ser	Description of works	Progress in %
1.	Foundation upto plinth including DPC,	6.75 %
2.	Super structure upto floor	
	a. Ground floor	4.23 %
	b. 1st floor	4.23 %
	c. 2nd floor	4.23 %
	d. 3rd floor	4.23 %
	e. 4 TH Floor	4.23 %
3.	RCC roof slab with insulation if any :	
	a. Ground floor	3.43 %
	b. 1st floor	3.43 %
	c. 2nd floor	3.43 %
	d. 3 rd floor	3.43 %
	e. Top roof including pent house & water tank etc.	5.30 %
4.	Chowkats, wooden door shutters, cup boards, cabinets, including brass mongaries for all floors.	11.02 %
5.	Steel doors, glazed & gauzed windows grills , sky light for all floors.	6.57 %
6.	Roof surface treatment with LCC	1.33 %
7.	Internal & External plaster including ceiling for floors and plinth protection	4.04 %
8.	Sanitary fittings. CI pipe including fitting, rain water pipes & kitchen sink for all floors.	4.80 %
9.	Flooring from ground floor to 4th floor except Mosaic	3.77 %
10.	Mosaic work & stonolathick for all floor	8.03 %
11.	General tiles for all floors.	0.71 %
12.	Internal electric & water supply for all floors.	8.70 %
13.	Stair railing white/colour wash, Distempering painting and polishing for all floors.	3.11 %
14.	Site clearance	1.00 %
	Total =	100 %

YARD STICK
CONSTRUCTION OF 52 "D" TYPE OFFICER QTR
(14 STORIED FRAMED STRUCTURE)

Ser	Description of works	Progress in %
1.	Foundation upto plinth	7.18%
2.	Supper structure upto roof level incl lindle and stair	
a.	Ground floor	1.22 %
b.	1 st floor	1.59 %
c.	2 nd floor	1.59 %
d.	3 rd floor	1.59 %
e.	4 th floor	1.59 %
f.	5 th floor	1.59 %
g.	6 th floor	1.59 %
h.	7 th floor	1.59 %
i.	8 th floor	1.59 %
j.	9 th floor	1.59 %
k.	10 th floor	1.59 %
l.	11 th floor	1.59 %
m.	12 floor	1.59 %
n.	13 th floor	1.59 %
3.	RCC Roof slab with insulation if any	
a.	Ground floor	1.41 %
b.	1 st floor	1.41 %
c.	2 nd floor	1.41 %
d.	3 rd floor	1.41 %
e.	4 th floor	1.41 %
f.	5 th floor	1.41 %
g.	6 th floor	1.41 %
h.	7 th floor	1.41 %
i.	8 th floor	1.41 %
j.	9 th floor	1.41 %
k.	10 th floor	1.41 %
l.	11 th floor	1.41 %
m.	12 floor	1.41 %
n.	13 th floor incl pent house water tank and machine room	2.65 %

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RESTRICTED

Ser	Description of works	Progress in %
4.	Chowkat wooden door shutter cupboard, cabinet incl mongaries for all floor	14.15 %
5.	Aluminium door glazed and gauzed window syk-light grill for all floor	5.50 %
6.	Roof surface treatment incl LCC	0.34 %
7.	Internal Ext Plaster incl Ceiling for all floor	2.26 %
8.	Sanitary fitting CI pipe rain water pipe incl fittings, kitchen sink for all floor	4.17 %
9.	Flooring for ground floor to 13 th floor Except mosaic and glazed tiles Incl glass strip	1.49 %
10.	Mosaic tiles for all floor	4.54 %
11.	Glazed Tiles for all floor	3.10 %
12.	Internal electric & water supply line for all floor	8.95 %
13.	Stair railing with colour wash distempering painting polishing for all floor.	4.00 %
14.	Site clearance	1.00 %
Total=		100 %

YARD STICK
CONSTRUCTION OF 10 MARRIED FOLLOWERS
QTR (5 STORIED BLDG)

Ser	Description of works	Progress in %
1.	Foundation upto plinth incl DPC	7.32 %
2.	Superstructure upto roof level including lintel & stair	7.32 %
	a. Ground floor	7.32 %
	b. 1 st floor	7.32 %
	c. 2 nd floor	7.32 %
	d. 3 rd floor	7.32 %
	e. 4 th floor	7.32 %
3.	RCC roof with insulation if any	2.64 %
	a. Ground floor	2.64 %
	b. 1 st floor	2.64 %
	c. 2 nd floor	2.64 %
	d. 3 rd floor	2.64 %
	e. Top roof including pent house Cornice, railing, water tank etc	4.02 %
4.	Chowkats wooden door plastic door shutter incl Mongaries for all floor	4.66 %
5.	Steel door glazed and gauzed window & syk-light etc for all floors	7.59 %
6.	Roof surface treatment incl LCC	1.71 %
7.	Internal Ext Plaster incl Ceiling for all floor & plinth protection	5.04 %
8.	Sanitary fitting CI pipes incl rain water pipe for all floor	3.68 %
9.	Flooring for all floor	5.26 %
10.	Internal electric & water supply line for all floor	6.89 %
11.	Stair railing stonolithic painting polishing white/colour wash for all floor.	5.67 %
12.	Site clearance	1.00 %
	Total =	100%

YARD STICK
CONSTRUCTION OF 12 MARRIED FOLLOWERS QTR
(6 STORIED)

Ser	Description of works	Progress in %
1.	Foundation upto plinth level	10.14%
2.	Superstructure upto roof level including lintel & stair etc.	
	a. Ground floor	6.77 %
	b. 1 st floor	6.06 %
	c. 2 nd floor	6.06 %
	d. 3 rd floor	6.06 %
	e. 4 th floor	6.06 %
	f. 5 th floor	6.06 %
3.	RCC roof slab with insulation if any	
	a. Ground floor	2.33 %
	b. 1 st floor	2.33 %
	c. 2 nd floor	2.33 %
	d. 3 rd floor	2.33 %
	e. 4 th floor	2.33 %
	f. Top roof incl pent house water tank etc	5.13 %
4.	Chowkats wooden door shutters cupboard incl iron mongarics	1.94 %
5.	Steel doors glazed and gauzed windows grill syk-light etc	9.54 %
6.	Roof surface treatment with LCC	1.41 %
7.	Internal & Ext Plastering incl Ceiling for all floor & plinth protection	5.02 %
8.	Sanitary fittings PVC pipes incl rain water pipe	3.16 %
9.	Flooring for all floors	4.14 %
10.	Internal electric & water supply line for all floor	2.78 %
11.	Stair railing stonolithic painting polishing white/colour washing etc	7.02 %
12.	Site clearance	1.00%
	Total =	100%

RESTRICTED

ANNEX - E TO
R.I. NO- 621/2008

YARD STICK
DOUBLE STORIED BUILDING (FRAMED STRUCTURE)

Ser	Description of works	Progress in %
1.	Foundation upto plinth including DPC,	14.30%
2.	Super structure upto roof level including lintel & Stair :-	
	a. Ground floor	10.32%
	b. 1st floor	12.04%
3.	RCC roof slab with insulation if any :-	
	a. Ground floor roof	11.40%
	b. Top roof including pent house, railing, cornice etc	13.68%
4.	Chowkats, wooden door shutters, cupboard including iron mongaries for all floors.	6.27%
5.	Steel door windows for all floor	6.24%
6.	Roof surface treatment with LCC	2.62%
7.	Internal & external plaster including for all floor and plinth protection.	6.12%
8.	Sanitary fitting for all floor.	2.31%
9.	Flooring excluding stonolethic finish for all floors.	4.50%
10.	Internal electric & water supply for all floors.	4.20%
11.	Stair railing stonolethic finish painting, polishing, white/colour washing, for all floors.	5.00%
12.	Site clearance	1.00%
	Total	100.00%

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RESTRICTED

YARD STICK
CONSTRUCTION OF 28 "B" TYPE QTR (8 STORIED WITH
4 FLAT IN EACH FLOOR CAR PARKING & OTHER
FACALITIES IN GROUND FLOOR)

Ser	Description of works	Progress in %
1.	Foundation upto plinth including DPC,	5.73%
2.	Super structure wall upto roof level including lintel & Stair :-	
	a. Ground floor	1.34 %
	b. 1st floor	2.12 %
	c. 2 nd floor	2.12 %
	d. 3 rd floor	2.12 %
	e. 4 th floor	2.05 %
	f. 5 th floor	2.05 %
	g. 6 th floor	2.05 %
	h. 7 th floor	2.05 %
3.	RCC roof slab with insulation if any :-	
	a. Ground floor	2.59 %
	b. 1st floor	2.47 %
	c. 2 nd floor	2.47 %
	d. 3 rd floor	2.47 %
	e. 4 th floor	2.45 %
	f. 5 th floor	2.45 %
	g. 6 th floor	2.45 %
	h. 7 th floor	3.98 %
4.	Chowkat, wooden door shutters, cupboard cabinets including brass mongaries for all floors.	10.27%
5.	Aluminum door glazed/ gauzed windows sky light grill for all floor	7.47%
6.	Roof surface treatment with LCC	0.44%

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Ser	Description of works	Progress in %
7.	Internal & external plaster including ceiling for all floor	1.82%
8.	Sanitary fitting UFVC pipe incl fittings for rain water waste water pipe & kitchen sink for all floors.	5.16%
9.	Flooring from ground floor to 7 th except floor tiles.	2.56%
10.	Floor tiles (Homogenous tiles) for all floor	7.44%
11.	Glazed tiles in wall for all floors	2.78%
12.	Internal electric & water supply for all floor.	11.45%
13.	Stair railing & decoration works such as plastic paint, syn paint acrylic weather coat paint & polish for all floors.	6.65%
14.	Site clearance	1.00%
Total		100 %

RESTRICTED

ANNEX - G TO
R.I. NO- 621/2008

YARD STICK
COOK HOUSE AND DINING HALL FOR
6 NCO'S & 120 MEN SM BK (NORMAL)

Ser	Description of works	Progress in %
1.	Foundation upto plinth including DPC,	11.30%
2.	Super structure upto roof level including lintel	22.00%
3.	RCC roof slab with insulation if any :-	30.00%
4.	Wooden work such as Chowkat, wooden door shutter including iron mongaries	1.00%
5.	Steel door, glazed & windows , grill etc(Aluminum window)	12.00%
6.	Roof surface treatment with LCC	3.50%
7.	Internal & external plaster including ceiling, plinth protection etc.	3.00%
8.	Sanitary fitting G.I. pipe including fittings and rain water pipe.	1.00%
9.	Flooring including Mosaic, glazed tiles & stonolethic etc	8.00%
10.	Internal electric & water supply.	5.00%
11.	White/Colour washing, painting etc.	2.20%
12.	Site clearance	1.00%
Total		100 %

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RESTRICTED

YARD STICK**CONSTRUCTION OF 52 `C` TYPE OFFICERS QTR 14
STORIED WITH 4 FLAT IN EACH FLOOR CAR PARKING &
OTHERS FACHELITES IN GROUND FLOOR**

Ser	Description of works	Progress in %
1.	Raft Foundation	8.96 %
2.	Raft Foundation top to plinth level	2.04 %
3.	Super structure upto roof level/ lintel & etc	
a.	Ground floor	0.91 %
b.	1 st floor	1.31 %
c.	2 nd floor	1.31 %
d.	3 rd floor	1.31 %
e.	4 th floor	1.31 %
f.	5 th floor	1.31 %
g.	6 th floor	1.31 %
h.	7 th floor	1.31 %
j.	8 th floor	1.31 %
k.	9 th floor	1.31 %
l.	10 th floor	1.31 %
m.	11 floor	1.31 %
n.	12 floor	1.31 %
o.	13 th floor	1.31 %

RESTRICTED

Ser	Description of works	Progress in %
4.	RCC slab with insulation if any	1.52 %
	a. Ground floor	1.52 %
	b. 1 st floor	1.52 %
	c. 2 nd floor	1.52 %
	d. 3 rd floor	1.52 %
	e. 4 th floor	1.52 %
	f. 5 th floor	1.52 %
	g. 6 th floor	1.52 %
	h. 7 th floor	1.52 %
	j. 8 th floor	1.52 %
	k. 9 th floor	1.52 %
	l. 10 th floor	1.52 %
	m. 11 floor	1.52 %
	n. 12 floor	1.52 %
	p. Top roof Including pen house w/tank machine room parapet etc over roof all works.	1.30 %
5.	Chowkats, wooden door shutters, CB cabinets i/c brass mongers for all rollers.	9.43 %
6.	Aluminum door glazed/ gauzed window grills sky loght etc for all floors	7.09 %
7.	Internal & external plaster including ceiling for all floor.	2.31 %
8.	Sanitary fitting PVC pipe incl fittings for rain water soil pipe & kitchen seize etc for all floor's.	4.00 %
9.	Flooring from 1st floor to 13th floor	6.53 %
10.	Glazed tiles in wall for all floors	1.52 %
11.	Stair railing & decoration works such as white wash colour wash Destemper, Polish, plastic paint, Syn-enamel paint, Stair Handrail, Acrylic weather paint etc all floors.	3.65 %
12.	Internal electric & water supply for all floor.	10.68 %
13.	Roof surface treatment with LCC (2:2.7)	0.27 %
14.	Site clearance	1.00%
	Total	100 %

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RESTRICTED

YARD STICK
CONSTRUCTION OF 50 BOQ (5 STORIED)

Ser	Description of works	Progress in %
1.	Foundation upto plinth incl, DPC	10.57 %
2.	Superstructure upto roof level including lintel & stair	
	a. Ground floor	4.83 %
	b. 1 st floor	4.83 %
	c. 2 nd floor	4.83 %
	d. 3 rd floor	4.83 %
	e. 4 th floor	4.83 %
3.	RCC roof with insulation if any:	
	a. Ground floor	3.13 %
	b. 1 st floor	3.13 %
	c. 2 nd floor	3.13 %
	d. 3 rd floor	3.13 %
	e. Top roof including pent house Cornish, railing, water tank.	4.94%
4.	Chowkats, wooden door, plastic door sutter incl, Mongaries for all floor.	8.12%
5.	Steel door, glazed & gauged window grill & sky light etc for all floors.	3.81%
6.	Roof surface treatment with L.C.C	1.06%
7.	Internal & external plastering incl ceiling for all floor & plinth protection.	4.78%
8.	Sanitary fitting, CI pipes incl rain water pipe for all floor	3.32%
9.	Flooring for all floors	12.90%
10.	Internal electric & water supply for all floor	6.01%
11.	Stair railing, stonolithic, painting polishing, white/colour wash for all floor.	6.82%
12.	Site Clearance	1.00%
Total =		100 %

CONSTRUCTION OF 10 MRD JCO'S QTR (5 STORIED)

Ser	Description of works	Progress in %
1.	Foundation upto plinth incl ,DPC	8.39 %
2.	Superstructure upto roof level incl & stair	
	a. Ground floor	5.69 %
	b. 1 st floor	5.17 %
	c. 2 nd floor	5.17 %
	d. 3 rd floor	5.17 %
	e. 4 th floor	5.17 %
3.	RCC roof with insulation if any:	
	a. Ground floor	3.29 %
	b. 1 st floor	3.29 %
	c. 2 nd floor	3.29 %
	d. 3 rd floor	3.29 %
	e. Top roof including penthouse Cornish, railing, water tank.	5.58 %
4.	Chowkats, wooden door, sutter cupboards incl, Mongaries for all floor.	10.09 %
5.	Steel doors, glazed & gauged window grills sky light etc for all floors.	6.56 %
6.	Roof surface treatment with L.C.C	1.90 %
7.	Internal & external plastering incl ceiling for all floors & plinth protection.	5.86 %
8.	Sanitary fitting, CI pipes incl rain water pipes for all floors.	4.50 %
9.	Flooring for all floor	5.26 %
10.	Internal electric & water supply	7.13 %
11.	Stair railing, stonolithic, painting polishing, white/colour wash for all floor.	4.20 %
12.	Site Clearance	1.00 %
Total =		100 %

YARD STICK
JCO'S & OR'S QTR (5 STORIED)

Ser	Description of works	Progress in %
1.	Foundation upto P.C incl. DPC	8.53 %
2.	Super structure upto roof level including incl lintel & stair:	
	a. Ground floor	4.89 %
	b. 1st floor	4.89 %
	c. 2nd floor	4.89 %
	d. 3rd floor	4.89 %
	e. 4 th floor	4.89 %
3.	RCC roof with insulation if any :	
	a. Ground floor	4.42 %
	b. 1st floor	4.42 %
	c. 2nd floor	4.42 %
	d. 3 rd floor	4.42 %
	e. Top roof incl pent house, cornice, railing & water tank etc.	7.96 %
4.	Chowkats, wooden door shutters, cupboard incl iron mongeries for all floors.	9.05 %
5.	Steel doors, glazed & glazed windows, grills, skylight etc for all floors	6.07 %
6.	Roof surface treatment with LCC	1.74 %
7.	Internal & external plastering including, ceiling for all floors and plinth protection	4.96 %
8.	Sanitary fitting & CI pipes including rain water pipes for all floors.	4.12 %
9.	Flooring for all floors.	3.58 %
10.	Internal electric & water supply	4.65 %
11.	Stair railing, stonolethic, painting, polishing, white/ colour washing etc	6.21 %
12.	Site clearance	1.00 %
Total =		100 %

YARD STICK
CONSTR OF 16 OR'S QTR (8 STORIED)
(FRAMED STRUCTURE)

Ser	Description of works	Progress in %
1.	Foundation :	
	a. RCC cast in situ pile	9.42 %
	b. Foundation upto plinth	5.65 %
2.	Superstructure upto roof level incl & stair and lintel	
	a. Ground floor	2.98 %
	b. 1 st floor	2.67 %
	c. 2 nd floor	2.58 %
	d. 3 rd floor	2.58 %
	e. 4 th floor	2.51 %
	f. 5 th floor	2.51 %
	g. 6 th floor	2.27 %
	h. 7 th (Top) floor	3.75 %
3.	RCC roof with insulation if any:	
	a. Ground floor	2.97 %
	b. 1 st floor	2.72 %
	c. 2 nd floor	2.72 %
	d. 3 rd floor	2.72 %
	e. 4 th floor	2.72 %
	f. 5 th floor	2.72 %
	g. 6 th floor	2.72 %
	h. 7 th (Top) floor	5.25 %
4.	Chowkats, wooden door, shutters cupboard incl, Mongeries for all floor	8.18 %
5.	Steel doors, glazed & gauged window grills sky light etc for all floors.	4.24 %
6.	Roof surface treatment with L.C.C	0.51 %

RESTRICTED

Ser	Description of works	Progress in %
7.	Internal & external plastering incl ceiling for all floors & plinth protection	3.95 %
8.	Sanitary fitting, CI pipes incl rain water pipes for all floors	3.58 %
9.	Flooring for all floor	4.05 %
10.	Internal electric & water supply for all floors	9.83 %
11.	Stair railing, stonolithic, painting polishing, white/colour wash for all floors.	3.20 %
12.	Site Clearance	1.00%
Total =		100%

YARD STICK
SM BK FOR 10 NCO'S & 200 MEN (6 STORIED WITH 6
STORIED FDN) STORE IN GROUND FLOOR EXCEPT
(CH & DH) FRAMED STRUCTURE

Ser	Description of works	Progress in %
1.	Foundation upto plinth level	9.21 %
2.	Superstructure upto roof level including lintel & stair	
	a. Ground floor	4.15 %
	b. 1 st floor	4.15 %
	c. 2 nd floor	4.15 %
	d. 3 rd floor	3.67 %
	e. 4 th floor	3.67 %
	f. 5 th floor	3.26 %
3.	RCC roof with insulation if any:	
	a. Ground floor	5.30 %
	b. 1 st floor	5.14 %
	c. 2 nd floor	5.14 %
	d. 3 rd floor	5.14 %
	e. 4 th floor	
	f. Top roof including pent house Cornice, railing, water tank etc.	8.79 %
4.	Door windows, CSWS complete for all floor	3.52 %
5.	Cup board complete incl chowkat for all floor.	2.68 %
6.	Roof treatment with L.C.C	1.46 %
7.	Internal plaster incl cup board and external plaster for all floor & plinth protection.	4.74 %
8.	Sanitary fitting, CI pipes incl rain water pipe for all floor.	2.63 %
9.	Floor finishing except mosaic for all floors	10.32 %
10.	Internal electric & water supply for all floor	4.09 %
11.	Stair railing, mosaic, painting polishing, white/colour washing etc for all floors.	2.65 %
12.	Site Clearance	1.00 %
	Total =	100 %

YARD STICK
SM BK FOR 8 NCO'S & 160 MEN (5 STORIED WITH 6
STORIED FDN) STORE IN GROUND FLOOR EXCEPT
(CH & DH) FRAMED STRUCTURE

Ser	Description of works	Progress in %
1.	Foundation up to plinth level	10.90 %
2.	Superstructure upto roof level including lintel & stair.	
	a. Ground floor	4.90 %
	b. 1 st floor	4.90 %
	c. 2 nd floor	4.90 %
	d. 3 rd floor	4.34 %
	e. 4 th floor	3.85 %
3.	RCC roof with insulation if any:	
	a. Ground floor	6.27 %
	b. 1 st floor	6.08 %
	c. 2 nd floor	6.08 %
	d. 3 rd floor	6.08 %
	e. Top roof including pent house Cornice, railing, water tank etc.	10.40 %
4.	Door windows, CSWS complete for all floor.	3.38 %
5.	Cup board complete incl chowkat for all floor.	2.53 %
6.	Roof treatment with L.C.C	1.73 %
7.	Internal plaster incl cup board and external plaster for all floor & plinth protection.	4.78 %
8.	Sanitary fitting, CI pipes incl rain water pipe for all floor.	2.58 %
9.	Floor finishing except mosaic for all floors	8.98 %
10.	Internal electric & water supply for all floor.	4.04 %
11.	Stair railing, mosaic, painting polishing, white/colour washing etc for all floors.	2.28 %
12.	Site Clearance	1.00 %
Total =		100 %

YARD STICK
CONSTRUCTION OF 16 JCO'S QTR (8 STORIED)
FRAMED STRUCTURE

Ser	Description of works	Progress in %
1.	Foundation : a. RCC cast in situ pile b. Foundation upto plinth	10.34 % 6.63 %
2.	Superstructure upto roof level incl stair and lintel	
	a. Ground floor	3.15 %
	b. 1 st floor	3.13 %
	c. 2 nd floor	3.11 %
	d. 3 rd floor	3.11 %
	e. 4 th floor	3.04 %
	f. 5 th floor	3.04 %
	g. 6 th floor	2.83 %
	h. 7 th floor	3.09 %
3.	RCC roof with in-solution if any:	
	a. Ground floor	2.91 %
	b. 1 st floor	2.64 %
	c. 2 nd floor	2.64 %
	d. 3 rd floor	2.64 %
	e. 4 th floor	2.64 %
	f. 5 th floor	2.64 %
	g. 6 th floor	2.64 %
	h. 7 th (Top) floor	5.43 %
4.	Chowkats, wooden door, shutters cupboard incl, Mongaries for all floor.	6.68 %
5.	Steel doors, glazed & gauged window grills sky light etc for all floors.	3.41 %
6.	Roof surface treatment with L.C.C	0.73 %
7.	Internal & external plastering incl ceiling for all floors & plinth protection.	3.61 %

RESTRICTED

Ser	Description of works	Progress in %
8.	Sanitary fitting, CI pipes incl rain water pipes for all floors	3.34 %
9.	Flooring for all floor	3.79 %
10.	Internal electric & water supply for all floors	8.51 %
11.	Stair railing, stonolithic, painting polishing, white/colour wash for all floors.	3.28 %
12.	Site Clearance	1.00 %
Total =		100 %

YARD STICK
CONSTRUCTION OF 104 MRD JCO'S QTR/OR'S QTR
(14 STORIED) FRAMED STRUCTURE

Ser	Description of works	Progress in %
1.	Foundation upto plinth level DPC	10.14 %
2.	Superstructure with upto roof level incls & stair and lintel etc	
a.	Ground floor	2.68 %
b.	1 st floor	2.77 %
c.	2 nd floor	2.77 %
d.	3 rd floor	2.77 %
e.	4 th floor	2.77 %
f.	5 th floor	2.77 %
g.	6 th floor	2.77 %
h.	7 th floor	2.77 %
j.	8 th floor	2.77 %
k.	9 th floor	2.77 %
l.	10 th floor	2.77 %
m.	11 th floor	2.77 %
n.	12 th floor	2.77 %
p.	13 th floor	2.77 %
3.	RCC roof salb with insulation if any:	
a.	Ground floor	0.94 %
b.	1 st floor	0.80 %
c.	2 nd floor	0.80 %
d.	3 rd floor	0.80 %
e.	4 th floor	0.80 %
f.	5 th floor	0.80 %
g.	6 th floor	0.80 %
h.	7 th floor	0.80 %
j.	8 th floor	0.80 %
k.	9 th floor	0.80 %
l.	10 th floor	0.80 %
m.	11 th floor	0.80 %
n.	12 th floor	0.80 %
p.	13 th floor	0.80 %

RESTRICTED

Ser	Description of works	Progress in %
	q. Top roof of penthouse, lift machine room and water tank	1.49 %
4.	Chowkat, wooden door, shutters cupboard incl, iron mongaries for all floor	9.08 %
5.	Steel doors, glazed & gauged windows grills skylight etc for all floor.	4.28 %
6.	Roof surface treatment with L.C.C	0.27 %
7.	Internal & external plastering incl ceiling for all rooms & plinth protection	3.13 %
8.	Sanitary fitting, CI pipes incl rain water pipes for all floors	3.24 %
9.	Flooring for all floor	2.63 %
10.	Internal electric & water supply for all floors	6.65 %
11.	Stair railing, stonolithic, painting polishing, white/colour wash for all floors.	4.00 %
12.	Site Clearance	1.00%
Total =		100 %

Refs:

1. AHQ, E in C's Branch office order no. 150 dated 02-02-2007.
2. Board of officers submitted vide CMES (Air) Kurmitola letter no. PF/80032/89/E-1 dated 29/05/2007.

CHAPTER-V

ROUTINE INSTRUCTION NO 622/2008
COMPLAIN, APPEAL, SETTLEMENT OF DISPUTES &
ARBITRATION IN MES

AwfthM I Avcj

1| **AwfthM Kivi AwKvit** wbgewYZ t¶¶t ev cwivwZtZ tKvb μqKvixi wei“x AvbõvnbK AwfthM`vtqi Kiv hvBte, h_vt

K| cõK-thM`Zv wba¶¶Y Kivi t¶¶t t

(1) weÁvcb cõKvkZ nI qvi Zwi tL cõK-thM`Zvi `wj j cõZ Kiv bv _vKtj ev mæte` Avte`bKvixi Ab¶ivta Dnv cõBmva` bv Kiv tMtj ; ev

(2) mæte` Avte`bKvixi `úoxKi¶Yi Pwv`vi cwi t cõ¶¶tZ h_vmg tq Zrmæútk®e`vL`v cõvb bv Kiv nBtj ; ev

(3) cõK thM`Zvi `wj t j Dtj wLZ wby¶¶Ki Avtj vtK gj`vqb KwguU thM`Zv gj`vqb KwitZ e`_nBtj ; ev

(4) cõK-thM`Zv wba¶¶tY Ab`vqfite A`xKwZ Ávcb Kiv nBqvQ gtg`avi Yv Kwiv evi m½Z Kvi Y _vKtj ; ev

(5) `bõZ ev Pμvšgj K Kiv¶¶j vc mæútk®m`n nBtj |

L| Db¶¶, mwxgZ, mi vmwi, `ß-ch¶¶ I tKvtUkb c×wZi t¶¶t t

(1) cõhvR` t¶¶t, weia 90 Abmi Yμtg weÁvcb cõvb Kiv bv nBqv _vKtj ; ev

(2) cõhvR` t¶¶t, weÁvcb cõKvkZ nI qvi Zwi tL `icT` `wj j cõZ bv nBqv _vKtj ev mæte` `icT`vZv ev tKvtUkb`vZvi Ab¶ivta Dnv cõBmva` Kiv bv tMtj ; ev

(3) mæte` `icT`vZvi Ab¶ivta h_vmg tq e`vL`v cõvb bv Kiv nBtj ; ev

(4) tKej GKwU ev `f msL`K cõZKvix cõZõvb KZ¶ c¶Y Kiv mæte, GBifc Kwiv Mwiv wnb¶`R cõZ Kiv nBtj ; ev

(5) cõKvkZ weÁvtbi kZ`tgvZvteK, cõhvR` t¶¶t, cõK-`icT` mfv Abõvb KwitZ e`_nBtj h_vmg tq Dnv mæte` `icT`vZvMY¶K AewZ bv Kivi Kvi¶Y mæte` KwZcq `icT`vZv mfvq thM`vb KwitZ m¶¶g bv nBtj ; ev

(6) `icT` Avn¶¶tbi weÁvtb cõE weewZ tgvZvteK `icT` Db¶¶ KwitZ e`_nBtj ev `icT` Db¶¶ Ki¶¶Yi mgq Am½Z AvPiY Kiv nBtj ; ev

M| Dc-wewa (L) G Dɔj wLZ msiké KgRZP AwfthvMi welqē- wetePbvμtg Dnv ewZj ev tKvb mstkrabgj K e'e- v MhY Kiv nBte wKbv Zw0l tq wmxvš-MhY Kiti teb |

N| msiké KgRZP Zdimj -2 G ewYZ mgqmxgvi gta" AwfthvM ewZtji KviY ev D³ AwfthvMi wfwEiZ wK wK mstkrabgj K e'e- v (thgb- `icI ev c0ve `wj tji MhYthvM" ktZP mstkrabx Avt` k Rvi x) MhY Kiv nBqvQ ev nBte Zw0l tq wj wLZ wmxvš-msiké e'w³tk AeinZ Kwi teb |

O| tKvb e'w³ Dc-wewa (N) Gi Aaxb μqKvix KZR c0E wmxvš-mšó bv nBtj Ges AwfthvM w0úwEi welq AvMhX nBtj , wciCavi 2008 Zdimj -2 G ewYZ mgqmxgvi gta" μqKvix c0vftbi wBKU wj wLZ fite cpi vq GKB AwfthvM `vtqi Kwi tZ cwi te |

P| tKvb e'w³ KZR Dc-wewa (O) Gi Aaxb μqKvix Kvhfj q c0vftbi wBKU AwfthvM `wLj Kiv nBtj -

(1) μqKvix Kvhfj q c0vb hw` gj`vqb Kwglwi tPqivci mb ev m`m` nb, Zvrv nBtj wZwb D³ AwfthvM c0vftbi ci wciCavi 2008 Zdimj -2 G ewYZ mgqmxgvi gta" , Dnv msiké gšYvj q ev wfvvMi mipei wBKU t0YceR Zrmútk©msiké AwfthvMKvi vtK AeinZ Kwi teb; ev

(2) D³ AwfthvM w0úwEi welqiu Zrvni Avl Zvfv³ nBtj , wZwb AwfthvMi welqē- wetePbvμtg Dnv ewZj ev tKvb mstkrabgj K e'e- v MhY Kiv nBte wKbv Zw0l tq wmxvš-MhY Kwi teb Ges Zdimj - 2 G ewbZ mgqmxgvi gta" KviY Dɔj E ceR AwfthvM ewZj ev MpxZ mstkrabgj K e'e- v m0útk©Zrvni wmxvš-wj wLZ fite msiké e'w³tk AeinZ Kwi teb |

Q| tKvb e'w³ μqKvix Kvhfj q c0vb KZR c0E wmxvš-mšó bv nBtj , Zdimj - 2 ewbZ mgqmxgvi gta" , msiké gšYvj q ev wfvvMi mipei wBKU Dnvi AwfthvM `vtqi Kwi tZ cwi te |

R| msiké gšYvj q ev wfvvMi mipe, Zdimj -2 G ewbZ mgqti gta" , Dc-wewa (P) Ges (Q) Gi Aaxb `wLj KZ AwfthvMi welqē- wetePbvμtg Dnv ewZj ev tKvb mstkrabgj K e'e- v MhY nBte wKbv Zw0l tq wmxvš-MhY Kwi teb Ges KviY Dɔj E ceR AwfthvM ewZj ev wK wK mstkrabgj K e'e- v MhY Kiv nBqvQ Zv t tq msiké e'w³tk wj wLZ fite AeinZ μtg D³ wmxvšt Kwc msiké μqKvix l wmicuBDtk c0vb Kwi teb |

S| tKvb e'w³ c0Z`KwU `fi i Rb" wba0wi Z mgqmxgvi gta" wj wLZ wmxvš-c0B bv nBtj , D³ e'w³ Zdimj -2 G ewbZ mgqmxgvi gta" mi vmi D³ KZ0tqi ci eZx0DaYzb KZ0tqi wBKU AwfthvM `vtqi Kwi tZ cwi te |

T| tKvb e'w³ hw` mipe KZR c0E wmxvš-mšó bv nq, Zvrv nBtj D³ e'w³ wifD c0vftbj i wBKU Avxj Kwi tZ cwi te |

U| GB wevai Aaxb cĕvmmbK KZĕŋi wĕKU AwfthvM `vŋqti i mKj weavb wbtĕkl Kwi evi ciB tKej tKvb e`w³ wi wFD c`vŋbtj i wĕKU Avcxj Kwi tZ cwi tē|

V| tKvb e`w³, Dcweia (R) Gi Aaxb gšYvj q ev wefvŋMi miPe KZĕ cĕ Ē imxvš-cĕŋŋi ci, ev Zdmj -2 G enbZ mgqmŋvi gta` tKvb imxvš-cĕŋŋi bv nBtj wi wFD c`vŋbtj i tPqvi g`vŋbtK mŋ`vab Kwi qv Ő tMvcbxq Ő ewj qv wPwYZ GKwU mxj Mjv v Kiv Lvŋg wmwUJBD Gi wKvbxq wbgewYZfvŋte AwfthvM `vŋqti Kwi tZ cwi tē-

(1) AwfthvM Ges Dnvi mg_ŋb `wjjw` GKwU mxj Mjv v Kiv Lvŋg `vŋqti Kwi tēb, hvnvt` i gta` tKej wi wFD c`vŋbtj i tPqvi cvimb KZĕ tLv v nBtē;

(2) `dv (1) tZ enbZ mxj Mjv v Kiv ōtMvcbxqŋ Lvŋ gnvŋvi Pvj K, wmwUJBD tK mŋ`vabmŋg GKwU AMŋqbcŋtĪ wi wFD c`vŋbtj i wĕKU Avcxj Kwi evi B`Qv e`³ Kwi qv Ges AwfthvŋMi ai b Dŋj E Kwi qv tĕŋY Kwi tēb; Ges

(3) `dv (2) tZ ewYZ AMŋqbcŋtĪ i mŋZ Zdmj -2 G ewYZ AstKi wbeŋb dx Ges tdi ZthvM` wbi cĕv RvŋvbZ gnv-cwi Pvj K, wmwUJBD Gi AbKŋj e`vsK Wŋdu AvKvŋi mŋthvRb Kwi tēb|

W| μqKvix Ges Ab`vb` `ŋi cĕvmmbK KZĕŋi GKwU Ő AwfthvM tiwRŋviŐ Lvŋ qv DnvtZ AwfthvŋMi mŋwŋŋB weei Y I imxvš-wj wce× Kwi tē|

3| wi wFD c`vŋbtj MVb|

K| wmwUJBD `vŋqti KZ tKvb Avcxj chŋj vPbv Ges Zrm`utK⁹imxvš-cĕŋŋi Rb` Dc-weia (L) G Dŋj wEZ weŋkl ĀMŋYi mgšŋq wi wFD c`vŋbtj MVb Kwi tē|

L| Avŋŋi aviv 30 Abŋvŋti, wi wFD c`vŋbtj MVb Kwi evi Dŋŋtĕ` wmwUJBD Zdmj -2 Abŋvŋx Ges wbgewYZfvŋte mŋew` Z weŋkl ĀMŋYi GKwU Zvŋj Kv cĕZ Kwi tē-

(1) wbgewYZ 3 (wZb) tkYxi cĕZwU nBtZ 1 (GK) Rb Kwi qv m`m` mgšŋq wi wFD c`vŋbtj MVb Kwi tZ nBtē;

(K) μq mŋvš-AvBbMZ weŋŋ AwfĀZv m`ubemŋvZ weŋkl ĀMY, hvnvt` i gta` mi Kvi x, Avav mi Kvi x, `vŋZkwmZ cĕZŋvbmŋ ev Kŋcŋŋi kŋbi Aemi cĕŋ wmwŋqi KgRZŋMY Ašf⁹ nBtZ cvŋi b;

(L) Kwi Mix weŋkl Āvbm`ubæGes μqKvŋh⁹AwfĀZv m`ubemŋvZ weŋkl ĀMY; Ges

(M) μqKvŋh⁹ Pw³ e`e`vcvbi i wZbwmZ Ges AwfthvM I weŋva wĕ`ŋwĕi weŋŋ AwfĀZv m`ubemŋvZ weŋkl ĀMY, hvnvi v tdWŋŋi kb Ae evsj vŋ`k tP`vŋi Ae Kgv⁹ GŪ BŪvŋ⁹KZĕ gŋvbxZ nBtZ cvŋi bt

Zte kZ^o v^tK th c^oRvZtšj PvKixtZ Kg^oPZ tKvb Kg^oRZPwi wFD c^ov^tbtj Ašf^o
nBtZ cwi te bv |

- (2) Zdmj -2 Abynti wetkl AMYtK KwZcq wi wFD c^ov^tbtj tkYxf^o Kwi tZ nBte;
- (3) wi wFD c^ov^tbtj Kgct^o 3 (wZb) Rb m^o m^o mgštq MWZ nBte Ges Zvnt^o i gta^o
GKRb tPqi cvi mb wntmte gtbvbxZ nBteb;
- (4) wmwUJD, Dnvi gšYvj tqi `wqZi; wbtqwiRZ gšxi cev^otg^o b^omtg ht^ovch^o k^otZ^o
wi wFD c^ov^tbtj i m^o m^o I tPqi cvi mb gtbvbxZ Kwi teb;
- (5) wi wFD c^ov^tbtj , AwfthvMi c^oKwZ wetePbvq, wmwUJD KZ^o msiw^o Z Zvwj Kv nBtZ
mte^oP 2 (β) Rb m^o m^o tKm evB tKm wfw^oÉtZ tKv-AcU Kwi evi Rb^o wmwUJD tK
Ab^oiva RvbvBtZ cwi te |

M | wi wFD c^ov^tbtj I wetkl AMtYi Zvwj Kv wmwUJD msi^oY Kwi te Ges Dnvi AvM^oh^o
e^ow^ot^o i c^owBmva^o Kwi te |

N | wi wFD c^ov^tbtj i Kvh^ocwi Pvj bv mnRZi Kwi evi wel^oqu^o wbow^oZ Kwi evi Rb^o wi wFD
c^ov^tbtj i c^oZ^oK m^o m^o tK Zdmj -2 G ew^oY AvKv^oti Drmn fvZv ev m^oš^obx c^ov^tbi
ms^ovb i wL^otZ nBte |

O | wmwUJD, wi wFD c^ov^tbtj i Kvh^og cwi Pvj bvq Abyni Yxq GKw^o w^owi Z Kvh^oxwZ
Rvi x Kwi te |

P | wmwUJD tKvb Ae^ov^otZB tKvb AwfthvM ev Avcxj Kvh^otg m^oú^o nBtZ cwi te bv,
Zte wi wFD c^ov^tbtj i `wqZi I Kvh^oej x m^oš^ov^ote m^oú^o tbi m^oš^oav^o c^oq^oRbxq j wRw^oK m^oš^oav
c^ovb Kwi te |

**4 | Avcxj i w^oú^oÉ bv nl qv ch^o-P^o m^oú^o tbi t^ow^oUk Rvi x Kiv nBtj wei Z^o v^oKvi Rb^o w^ot^o R^o
c^ov^tbi t^ogZv |**

K | wmwUJD, Zdmj -2 G Dvj wL^oZ w^oav^o Z w^oéÜb dx Ges w^obi vcÉv RvgyvZmn tKvb Avcxj
Avte^o b c^ow^osi ci, Zdmj -2 G ew^oY mgqmxgvi gta^o, cvj v^omtg GKw^o wi wFD c^ov^tbtj w^oéP^ob
Kwi qv Dnvi w^oKU D^o Avcxj Avte^o b w^oú^oÉi Rb^o t^oc^oY Kwi te Ges D^o w^ol^otq wi wFD
c^ov^tbtj i w^ox^ovš- bv cvl qv ch^o- wi wFD c^ov^tbtj Gi wetePv^oarx tKvb

μqKvh⁹el t_q m³úv` b Kiv nBtZ weiZ _vKvi Rb` μqKvi x_tK wbt` R c¹ c⁰vb Kwi qv msiké gš_Yq ev wefv_tMi m¹Pe I Avte` bKvi x_tK M_{px}Z e`e`v m³úv_tK³c¹ gvi dZ Aew_nZ Kwi t_e|

L| μqKvi x ev w¹wfD c¹v_tb_tj i w_bKU t_Kv_b Awf_th_vM ev Av_cx_j weteP_vax_b _w_kt_j D³ Awf_th_vM ev Av_cx_tj i D_{ci} P_{ov}š-_mvš-bv n_l qv ch³-P_{ir}³ m³úv` t_{bi} t_{bw}UK R_vi_x K_{iv} h_vB_te b_v, Z_te Awf_th_vM weteP_vax_b _w_kt_j `ic¹ g_j`vq_b I D_{nv}i A_bt_gv` b c_μq_v Ae¹_vn_Z i_vL_v h_vB_te|

M| Dc-w_ew_a (K) Gi Aax_b P_{ir}³ m³úv` t_{bi} t_{bw}UK R_vi_x K_{iv} n_Bt_j weiZ _vKvi wbt` R_bv c⁰v_tb_i w_{el}q_wU c⁰h_vR` n_Bt_e b_v h¹ μqK_vi_x K_vh_q q c⁰h_vb, m_si_ké m¹Pe ev g_š_i A_bt_gv` b M_hYce_R, GB g_tg³m_wU_dt_{KU} c⁰vb K_ti t_h R_b`_t weteP_vq m_si_ké μq K_vh³c_wi P_vj b_v K_{iv} A_cw_i n_vh⁹|

N| Dc-w_ew_a (K) Gi Aax_b c⁰E m³úv` c¹ D³ μqK_vh³c_wi P_vj b_v A_cw_i n_vh_Zv weteP_vq w_fw_E μq K_vh_qt_gi t_iK_tW⁹ m_yb_w`_θf_rt_e D_tj_L K_wi_tZ n_Bt_e G_es D³ m³úv` c¹ w_eP_vi w_ef_vM_q c_pw_ef_eP_v e¹Z_xZ Awf_th_vt_Mi m_Kj ch_q P_{ov}š-_ew_j q_v M_Y` n_Bt_e|

O| t_Kv_b Av_cx_j Av_te` t_{bi} m_nZ Dc-w_ew_a (K) Gi Aax_b w_ba_fi Z w_beÜ_b w_dm G_es w_bi_vc_Ev R_vg_vb_Z R_gv b_v t` I q_v n_Bt_j, D³ K_vi_tY Av_te` b_wU w¹wfD c¹v_tb_tj i w_bKU Dc¹v_cb K_{iv} h_vB_te b_v g_tg³m_wU_dBD m_si_ké Av_cx_j Av_te` bK_vi_xt_K Aew_nZ K_wi q_v μqK_vi_xt_K D_{nv}i A_bg_j w_c c⁰vb K_wi t_e|

P| w_bt_qvM_cÜ_ß n_l q_vi Ae¹_vn_Z c_ti w¹wfD c¹v_tb_tj i t_Pq_vi c_vi m_b w_wU_dBD K_Z_R R_vi_xK_Z K_vh³e_vj_x t_gv_Zt_eK D_{nv}i K_vh³e_xi_Z w_ba_fi Y K_wi t_e|

5| w¹wfD c¹v_tb_j K_Z_R Av_cx_j K_Z w³úv_E|

K| t_Kv_b Av_cx_j Av_te` b w¹wfD c¹v_tb_tj i w_mx_vt_št_i R_b` t_cÜ_Y K_{iv} n_Bt_j G_es D³ Av_cx_j h_{_}h_{_} w_bi_vc_Ev R_vg_vb_Z I w_beÜ_b w_dm_n `v_tq_i K_Z n_Bt_j | w¹wfD c¹v_tb_j, D_{nv}i w_mx_vt_š-c⁰v_tb_i m_gq ch³-P_{ir}³ m³úv` t_{bi} t_{bw}UK R_vi_x m_sμ_vš-_wM_Zv_t` k Ae¹_vn_Z i w_Lt_Z μqK_vi_xt_K c_iv_gk³ w_te|

L| w¹wfD c¹v_tb_j Z_dw_mj -2 G e_wY_Z m_gq_mx_gv_i g_ta` D_{nv}i w_j w_LZ w_mx_vt_š-c⁰vb K_wi t_e G_es D³ w_mx_vt_št_i K_wc m_si_ké e¹w³, m_si_ké g_š_Yq ev wefv_tMi m¹Pe, w_wU_dBD G_es μqK_vi_xt_K c⁰vb K_i t_e|

M| Z_rQ (frivolous) K_vi_tY Awf_th_vM `v_tq_ti i K_vi_tY D_{nv} L_wi_R G_es, t_qŶ_gZ, w_bi_vc_Ev R_vg_vb_Z e_vt_Rq_vß K_{iv}i t_qŶ₁ e¹w_ZZ, Av_cx_j w³úv_Ei t_qŶ₁, w¹wfD c¹v_tb_j w_bæ_ew_YZ t_h t_Kv_b w_mx_vt_š-_Zš_fv_te ev m_wš_j Z_er_te c⁰vb K_wi t_Z c_wi t_e, h_{_}v_t

(1) K_vi_Y D_tj E_ce_R Av_cx_j Av_te` b L_wi_R K_wi q_v μqK_vi_xt_K μq K_vh_q c_wi P_vj b_v Ae¹_vn_Z i_vL_vi c_iv_gk³c⁰vb:

(2) Avcxj Avte`b DĪ wcz AwfthvMi wel qe`wb®úuĒi tġġġ cġhvR" weia-weavb I
bxvZ Dġj EceR Dnvi Avl Zvq AwfthvMKZ wel q wb®úuĒi Rb" h_vh_ e`e`v MġġYi Rb"
cġġe,`tK civgk®vb;

(3) μqKvix KZR MpxZ c`ġġc GB weagvj vi cwi cwš`nBġj Dnvi cġZKvi gġ K e`e`v
MġġYi Rb" mġcwi k cġ vb;

(4) μq mspvš-Pm³ KvhRiġY MpxZ e`e`v ev wmxvš-e`wZZ, μqKvix KZR weia-
weatġbi mwnZ mvgÄm`cY®bġn GBifc tKvb Kvh®ev wmxvš-, m`uY®ev AvsukK, evwZġj i
mġcwi k cġ vb;

(5) μqKvix GB weagvj vi Aaxb Dnvi eva`evaKZv cġZcuj ġb e`_nBqv _wKġj , wi wFD
c`vġbj Avcxj Avte`b `wLj Kvix e`w³ġK `icġ `wġj cġZ KiY I AvBb mspvš-e`q
Ges AwfthvM `wLj mspvš-Ab`vb" e`q eve` ġwZcġYmn weia 57 (12) (M) Gi Aaxb
cġ Ē wbi vcĒv RvgvZ tdi Z cġ vġbi mġcwi k cġ vb; Ges

(6) μq Kvhġg mgwġi Rb" mġcwi k cġ vb |

N | wi wFD c`vġbtġj i msl`vMwi ô m`m`ġ` i gZvgġZi wfiĒġZ wmxvš-MpxZ nBte |

O | wi wFD c`vġbtġj i wmxvš-Pdvš-nBte Ges mské mKj cġġ D³ wmxvš-tgvZvteK
e`e`v MġY Kwi te |

P | wi wFD c`vġbtġj i wmxvš-cġvġbi ci , Avej ġ`Avcxġj DĪ wcz AwfthvM I cġ Ē wmxvš-
meġvaviġYi cwi `kġbi Rb" D`ġ³ i wLġZ nBtet

Zte kZ`vġK th, wbaewYġ tġġġ tKvb Z` cġKvk Kiv hvBte bv, hw` D³ cġKvk -

- (1) tKvb AvBġbi cwi cwš`nq;
- (2) tKvb AvBġbi cġqMġK evaMġ-Kġi;
- (3) Rb`ġ`ġ cwi cšx nq;
- (4) cġġeġ` i AvBbvġM e`emvqK `ġ`ġK weivġZ Kġi ; ev
- (5) μq Kvġhġ Aeva cġZthvMvġK evaMġ-Kġi |

Q | μqKvix ev wi wFD c`vġbj KZR GB weia Aaxb MpxZ wmxvš-, Dnvi mg_ġb thšw³KZv
I Avbġ wġK wel qw` ġi KġWġ Ask nBte |

ġbvU t

- 1 | Zdvġj - 2 ej ġZ wcvAvi 2008 Zdvġj - 2 eġvte |
- 2 | weia ej ġZ wcvAvi 2008 Gi weia eġvte |

SETTLEMENT OF DISPUTES AND ARBITRATION

Purpose

6. The purpose of arbitration is to settle disputes between parties to a contract, through an arbitrator without going to civil courts, which involves lengthy and costly litigation.

Settlement of Disputes

7. The Employer and the Contractor shall use their best efforts to settle amicably all disputes arising out of or in connection with the Contract or its interpretation as per clause of the contract and Arbitration Act-2001.

Adjudicator

7. a. If the Contractor believes that a decision taken by the Engineer in charge (GEs/AGEs) was either outside the authority given to the Engineer in charge by the Contract or that the decision was wrongly taken, the decision shall be referred to the Adjudicator (CMES's) within fourteen (14) days of notification of the Engineer's decision in writing.

b. The Adjudicator (CMES) named in the PCC is jointly appointed by the parties. In case of disagreement between the parties, the appointing authority (DW&CEs) designated in the PCC shall appoint the Adjudicator within fourteen (14) days of receipt of a request from either party.

c. The adjudicator shall give its decision in writing to both parties within twenty-eight (28) days of receipt of a request from either party.

d. The adjudicator shall give its decision in writing to both parties within twenty-eight (28) days of a dispute being referred to it.

e. The Contractor shall make all payments (fees and reimbursable expenses) to the Adjudicator, and the Employer shall reimburse half of these fees through the regular progress payments.

f. Should the Adjudicator resign or die, or should the Employer and the Contractor agree that the adjudicator is not functioning in accordance with the provisions of the Contract; a new Adjudicator will be jointly appointed by the Employer and the Contractor. In case of disagreement between the employer and the Contractor, the Adjudicator shall be designated by the Appointing Authority designated in the PCC in the request of either party, within fourteen (14) days of receipt of a request from either party.

g. If the parties are unable to reach a settlement as per of GCC Clause within twenty-eight (28) days of the first written correspondence on the matter of disagreement, then either Party may give notice to the other party of its intention to commence arbitration in accordance with GCC Sub-Clause.

Arbitration Agreement

9. There must be an agreement between the parties to a contract to refer their disputes for settlement by arbitration. In MES Contracts, this is contained GCC in standard tender document (STD) of contract,

a. “The venue of arbitration shall be such place or places, as may be fixed by the arbitrator in his sole discretion”

b. “The award of the arbitrator shall be final, conclusive and binding on both parties to the contract”

c. “For the purpose of arbitration, the nominating authority, rank and status of the arbitrator would be, is also given in the standard tender document (STD)”.

d. In the case of contracts accepted by DW&CEs (Army/ Navy/Air) & CsMES exercising enhanced powers, the arbitrator will be an Engineer officer of the MES/ Corps of Engineers serving in MES/ Corps of Engineers and MES officers earlier served in MES NOT below the following rank. and nominated by QMG for Army works, E-in-C for Navy & Air force works.

(1) For claims below Tk. 20.00 Lac Lt Col /SE/ or above

(2) For claims of Tk. 20.00 Lac and over, Brig Gen/Colonel/CE

An arbitration agreement is irrevocable and neither party can back out of it.

What Can be Referred to Arbitration

10. As is evident from the arbitration in MES contracts, all disputes arising out of or relating to the contract, other than those for which the decision of adjudicator (CMES/SE) or of any other person is by the contract expressed to be final and conclusive, shall be referred to arbitration.

11. In a case in which the contractor has signed the final bill without reservation, the Govt can refuse to pay further claims of the contractors, preferred after the submission of his final bill. Govt cannot refuse arbitration on any further claim, if preferred by the contractor. If the claim is not genuine, the Govt can plead before the arbitrator that such a claim is inadmissible under relevant clause of contract.

Issue no-1 (Ref Judgement)

12. The plaintiffs signed the final bill in full satisfaction of all their claims. The endorsement on this bill shows that there was no further outstanding. I find that award was not invalid.

Issue no-2 (Ref Judgement)

13. The plaintiffs contractor received full payment under the final bill as stated above. The contractor where of presenting the final bill, the contractor will furnish a certificate that he has no further claim against the government and no further claim will be entertained. The plaintiffs are bound by the contract, they cannot reopen these claims again. I find this issue is the affirmative against plaintiffs.

(Ref: Extract from Judgment dt 27 March 1946 by Mr. S. Kader Hasan, Civil Judge, Lucknow in suit no 79 of 1945) for issue no 1 & 2.

What cannot be referred to Arbitration

14. Under the arbitration agreement itself all disputes arising out of or relating to the contract, for which the decision of the adjudicator (CMES/SE) or of any other person is by the contract, expressed to be final and conclusive, cannot be referred to arbitration. A list of such points or furnished below:

- a. Discrepancies between works specification and drawing.
- b. Extension of time for deviation.
- c. Contractor`s inability to carry out emergency works at once.

- d. Responsibility for and cost of repairs to MES plant and equipment loaned to contractor
- e. Defective works and unsoundness of materials and stores provided by contractor.
- f. Insurance of buildings used for storage of combustible materials.
- g. Cancellation of contract by corrupt Act, etc
- h. Responsibility for delay causing rise in price.

15. In case where a contractor prefers a claim against the final bill on which there is decision of CMES/SE etc and where such decision was given before the arbitration, it must be made clear to the arbitrator that his jurisdiction is ousted.

16. In a case in which a contractor signs a final bill under protest, but does not prefer any claim within three years of his having signed the final bill, cannot be referred to arbitration. In this case the contractor is debarred by the provisions of the Limitation Act 1908 from preferring claim against the Govt after the expiry of three years.

Reference to Arbitration

17. To submit a case for arbitration the following action has to be taken:

- a. Make request for the nomination of an arbitrator on the form classified as "Formal Submission to arbitration" attached as Annexure "A" to this RI. This serves the purpose of a written notice by either party to the other to state that disputes referable to arbitration have arisen and are sought to be referable to the sole arbitration of an officer named in the tender documents, to be nominated by an authority also named in the tender documents. In case where either party does NOT concede that the issues are referable to arbitration, the "Formal Submission" can be signed by the other party, which contends that the dispute (s) is/are referable to arbitration. This is usually known as unilateral submission to arbitration and is permitted by the Arbitration Act 2001 (Clause-29) which lays down that an arbitrator should be nominated, when either party has given a 30 days

notice in writing to the other party for appointment an arbitration, failing which the aggrieved party can appeal District Judge to order the appointment of an arbitrator under (Clause-12) of Arbitration Act 2001.

b. Obtain the claims of the party seeking arbitration and ask the other party to give their defence in rebuttal of these claims. In cases where the claimant is a contractor, the defence is prepared by the MES, usually by the GE who is the officer who supervises the execution of the work and issues most of the orders, which give rise to disputes. The MES defence should then be submitted to the SFC (Works) with a request for its scrutiny and remarks. SFC (Works) should be requested to give the defence first priority, particularly when a legal notice has been served for the appointment of an arbitrator. The MES defence may, if considered necessary, be rewarded, and a joint Statement of claims and defence prepared. This makes the task of the nominating authority and ultimately that of the arbitrator easier, who has a complete submission by both parties before him. The Joint Statement must be signed/countersigned by the Accepting Officer as a party to the contract. It must also be checked and endorse by the CMES for its correctness in case contracts of E in C /DW&CEs.

c. The MES Defence in arbitrator`s court will be conducted by:

- (1) For contracts accepted by E in C/DW & CE : DW & CE himself if he so wishes or by a CMES if the amount of claims exceeds Tk. 1,00,000.00
- (2) For Contracts accepted by CMES: By CMES if the amount of claims exceeds Tk.1,00,000.00 or by an XEN/Maj if the claim is lesser than Tk.1,00,000.00
- (3) For Contracts accepted by GE/AGE : By the accepting officer personally.

d. Request for nomination should be accompanied by the following documents:-

- (1) Formal Submission to arbitrator - 2 Copies
- (2) Joint Statement of Claims & Defence - 4 Copies
- (3) A brief history of case - 3 Copies

- (4) C T Cs of contract agreement - 3 Copies
- (5) All documents cited in claims/defence - 4 Copies

e. It may sometime happen that a contractor goes to court for the nomination of an arbitrator instead of applying to MES authorities concerned and the court may order nomination of the arbitrator. In such cases, the nominating authority may be ordered by the court to appoint an arbitrator. Preparation of documents mentioned in para-5 above will per force, has to follow the nomination and must be done with the utmost speed. If necessary, the arbitrator should be asked to direct the party, who is NOT cooperating to make its case available to the arbitrator, and the MES to prepare their case and defence.

f. (1) The authority to nominate an Arbitrator vests in E in C/ QMG, therefore the forwarding letters to the future arbitration papers sent to AHQ E in C's Branch Works Dte for nomination will be signed personally by the respective DW & CEs. AHQ, E in C's Branch, Works Dte will examine the claims and the defence previously scrutinized by the SFC/ FC (Wks). If the case warrants disciplinary action against CsMES/GEs etc; specially in the case of over-payment, AHQ, E in C's Branch, Works Dte will ask for a Sta Court of Inquiry, before sending the papers and will mention in the covering letter that disciplinary action / Station Court of Inquiry has been initiated. Where no disciplinary action is required, it will be so stated in the forwarding letter.

(2) Departmental Court of Inquiry will only be convened where pure departmental technicalities, procedural mistake and structural designs etc, are involved, the purpose of rectification in future designs.

(3) Where Courts of Inquiry are not necessary, but the persons responsible are evident, their names will be mentioned in the forwarding letters.

(4) The inquiries, charge sheets etc if any, will be kept ready, but award of punishments should be pending till the arbitration is completed.

Nomination/Appointment of Arbitrators

18. On receipt of complete papers required as para 17 (c) or a court order as per Clause 12 of Arbitration Act 2001 to nominate/appointment an arbitrator, Nomination of an Officer of the required rank will be made by the Nominating Authority named in the tender documents . The arbitrator so nominated or appointment by the court will be supplied with a copy of each of the documents, less the brief history of the case, by the nominating authority. In some cases these may have to follow and will be supplied by the accepting Officer.

Objection by Either Party to Particular Arbitrator

19. The essence of arbitration is the consent of the parties to a contract and either party has, therefore, the right to object to a particular arbitrator and ask for nomination of another in his place as per clause 13 of Arbitration Act 2001. The appointment and authority of an arbitrator CAN NOT be revoked except by a court of law. It therefore follows that where either party objects to a particular arbitrator, it may file a civil suit in a court of law as per Clause 14 of Arbitration Act 2001 having Jurisdiction over the matter, for removing the arbitrator and for the appointment of another arbitrator.

20. There are however exceptions which are recognized in law. These are:

- a. Both the parties to arbitration may, by mutual consent, request for or consent to the change of arbitrator. Even if one party objects to a particular arbitrator and the other does NOT Object to the change proposed, the legal requirements will be fulfilled. Failure to go to court as per Clause -14 of Arbitration Act 2001 in such cases will be cured by the consent of the parties.
- b. An arbitrator has the right to refuse his nomination or may neglect to act as per Clause 15 of Arbitration Act 2001, or in the event of death of arbitrator the office of the arbitrator falls vacant. The nominating authority can in such an event, fill the vacancy caused, by nominating another arbitrator. This is covered, under the provision of the Arbitration Act 2001.
- c. If, however, the nominating authority is satisfied that reasons stated by either party for remaining an arbitrator are such, that do not

warrant change of arbitrator, it may refuse to do so. In this case the only remedy available to the party seeking the change is either to accept the arbitrator or to go to a court of law under Clause 14 of Arbitration Act 2001 for his removal.

Hearing & Determination of the Case by the Arbitrator and powers of the Arbitrator

21. a. **Reference.** The arbitrator will receive or should direct the parties to submit to him a joint statement of claims by the claimant and defense by the party contesting the admissibility of the claims. This is necessary to make it clear that there is dispute between the parties as per Clause 17 of Arbitration Act 2001. The MES officer concerned should be asked to produce the contract documents under which the disputes have arisen.

b. **Power of Arbitrator.** Having obtained the joint statement of claims and defence, the arbitrator should make sure that the dispute is one, which he is empowered to deal with, under the arbitration clause of the contract, under Clause 17 of Arbitration Act. In certain matters like meaning of specifications, drawings, technical instructions, workmanship, and/or quality of materials, the Engineer Officer's decision is by the Contract expressed to be final, conclusive and binding. The arbitrator has no power to adjudicate in such matters but he has the authority in all other disputes and differences for which settlement is not provided under any clause of the Contract. In case of disputes, over which the arbitrator has NOT Jurisdiction, he should refer the parties to the correct means of settlement provided in the contract, the arbitrator will proceed as per Clause 23,24,25,26 and 27 of Arbitration Act 2001

An Arbitrator's Power of Settling the Disputes Covers:-

- (1) The work other than meaning of specifications, drawings, workmanship and quality of materials.
- (2) Execution of work with the same limitations as in (1) above.
- (3) Maintenance of work with the same limitations as in (1) above.
- (4) Meaning of the condition of the contract and

(5) Any other matter relating to or arising out of the contract the work or payments to be made for it.

c. **Statements.** Having satisfied himself of the existence of the disputes, which he is empowered to deal with, the arbitrator should study the contract agreement with particular reference to the clause, under which the disputes has/have arisen, or the point at issue with standard document such as relevant MES Schedule of Rates, where rates are disputed. After having studied the case he should appoint a date, time and place for hearing after giving the parties reasonable notice in writing to attend in a convenient place for hearing. An Arbitrator should ensure that both parties are present at every stage of the arbitration. Neither party should be seen or heard without the presence of the other. The arbitrator must preserve his judicial character on the points at issue. An arbitrator can, if he so wishes, administer oath to witnesses and parties, interrogate them, call for papers and documents, serve notices to persons to appear and apply to the court, to order production of documents before him, if his notices are not obeyed.

d. **Hearing.** An arbitrator should act as speedily as possible as per Clause 28 and 30 of Arbitration Act. He should NOT allow any digression from the disputes an issue, unless new dispute is submitted to him writing by both parties. However, when in doubt as to the relevancy of the evidence offered, the evidence should be accepted, as failure to hear evidence which is later shown to be material to the dispute, can result in the award being set aside in court. Both parties should be given a chance to be heard, and if it appears that instead of stating their case clearly, they are indulging in lengthy arguments, they should be asked to state their case in writing.

e. **Power to Appoint Experts, Legal Advisers or Assessors.** An arbitrator can appoint expert, legal advisers or assessor's questions of facts under Clause 32 of Arbitration Act 2001.

f. **Summons to Witnesses.** An Arbitrator may apply to the court for issuing summons upon any person necessary for examining, or submitting materials or appearing, or producing before the arbitrator for both the purposes, as the case may be, and the Court shall issue such summons under clause 33 of Arbitration Act 2001.

g. **Other Points to be Observed during Arbitrator's Court Hearing.**

The arbitrator should ensure that:

- (1) The joint statement submitted by the parties must be precise and should specify clearly the points under dispute.
- (2) Copies of ALL communications, including the statement of claims and defence submitted to the arbitrator for decision should be endorsed to the other party for enabling the second party to prepare its defence. Reasonable time should be allowed for this.
- (3) Either party to arbitration can be represented by an authorized representative, called the defending officer, from the Govt side and an attorney on the contractor's side. As Govt deeds/agreements are exempted from the Stamp Act, the Govt officer should be in possession of a letter of authority and the contractor's representative/ lawyer must be in possession of a legal power of attorney duly stamped with court fee stamps.
- (4) If either party absents it without assigning and reasons for the absence, the arbitrator may, after a reasonable notice in writing, proceed with the case and give an award experte.

h. Arbitrators are advised to make particular reference to the work Diaries maintained during the progress of the works, as these Diaries are useful documents in finding out the effects of the running of the contracts. The work diaries are filled with the GEs/AGEs.

22. a. **The Award.** Making of arbitral award and termination of proceedings as per clause 36, 37,38,39,40 & 41 of Arbitration Act 2001. The award should determine ALL differences raised in the submission and nothing more. The award must also be clear on the issue of final bills, it must state as to whether or NOT the final bill is payable in addition to the amount of the award or is adjustable against the amount awarded. Care should be taken to see whether the final bill is payable in addition to the amount of the award or is adjustable, against the amount awarded. Care should also be taken to see whether the final bill has been signed by the contractor without any reservations and if so, no claims can be preferred by the contractor. In short, the meaning of an award should be clear and unambiguous. Supplementary awards and clarifications or corrections after the award has been published are NOT permitted as they do NOT amount

to more than a mere spoliation by a stranger. The award must stand or fall by itself nothing can be added to or subtracted from an award once it has been published. An arbitrator is thoroughly functionous officer (having been- is out of office) after publishing his award. The only power conferred on the arbitrator under the clause of 40 of arbitration Act 2001 is to correct a clerical error without necessity of application to court or errors arising from an omission or an accidental slip. If the error or slip, be of any other kind, it cannot be corrected. Correction and interpretation of Award should be done within 14 (Fourteen days) from the receipt of the Award with notice/request to other party to correct any computation errors, any clerical or typographical errors or any other errors of a similar nature occurring in the award.

b. **Stamping of the Award.**

(1) An award has to be stamped in accordance with the Bangladesh Stamp Act 1899 for the time being in force. Calculating the stamp duty amount of claims by both parties to arbitration should be totaled and the stamp duty on this total levied on the original award. Copies of award are also to be stamped. The rates for stamp duty presently in force are given in annexure “F” to this RI.

(2) The defect in an award for want of stamps can be cured at any time by affixing additional stamps to it, but such an eventuality should never arise.

(3) Payment of contingent bills for stamp papers required by arbitrator can be authorized by UAGE.

c. **Record Distribution of Copies of an Award.** The original award together with arbitrator’s personal papers which include statements and/or depositions by parties in writing. Notes taken by the arbitrator if any correspondence to and from parties to arbitration should be enclosed in a sealed cover boldly marked “PAPERS OF ARBITRATOR-ORIGINAL AWARD & DOCUMENTS PERTAINING TO CA NO-----OF-----” and addressed the AHQ, E in C Branch, Wks Dte. This inner cover will be enclosed and sealed in an outer cover and sent to SO-I/E-8, AHQ, E in C Branch, Wks Dte, Dhaka Cantt by name for record and safe custody. Stamped and two unstamped copies of award should also be

made. A stamped copy each will be supplied to the parties to arbitrator i.e. the contractor and the accepting officer and an unstamped copy to AHQ, E in C Branch, Wks Dte, AHQ QMG's Branch & DW&CE's of the service concerned for their record. In cases where nomination of arbitrator is made by QMG, an unstamped copy he award will be supplied to him. An unstamped copy of the award will be supplied by the Arbitrator to the FC/SFC (Wks)

d. **Time for marking an Award.** Under the provisions of the Clause 23 and sub clause (2) of the Arbitration Act 2001, the arbitration shall deal with the dispute submitted to it as quick as possible.

Note: There is no time limit to make an award as per clause 23 (2) of Arbitration Act 2001. However a period of four month from the date of first hearing may be considered to be reasonable for settlement of any dispute.

The under mentioned Annexure to this RI show specimen forms of:

Annexure "B" - Notice to parties by arbitrator asking them to submit their case & fixing a date, time & place for the hearing

Annexure "C" - Notice to by arbitrator where either party fails to comply with the first notice.

Annexure "D" - Application by arbitrator to court for extension of time to publish his award.

e. **Form of Award.** An award must determine all matters in dispute and should be itemwise [see para 22 (a) above]. A specimen form is attached as Annexure "E" to this RI. An arbitrator's award need not contain any reason, recitals or use any particular works. It should be constructed to show the real intention of the arbitration and show the final, certain and sufficient termination of the matters in dispute. The award must speak for itself without any extrinsic help. If an award is challenged in court, it is NOT even permissible to the court to send for the arbitrator and examine him as to the meaning of or reasons for the award. In such case unless the arbitrator himself so chooses, he need NOT give any reasons in support of the award. The award must therefore be self-sufficient.

Grounds on which a court can set aside an Award

23. The court may set aside an award on the application of a party within sixty days from the receipt of the award under Clause-42 of Arbitration Act 2001 on the ground stated in Clause-43. An award shall not be set aside except on one or more of the following grounds:

- a. Misconduct by the arbitrator or proceedings. This includes:
 - (1) Rejection of material evidence.
 - (2) Accepting hospitality from one party, who intends to induce the arbitrator in his favour.
 - (3) Bias, partiality and/or interest in one party.
 - (4) Moral turpitude and/or corruption.
 - (5) Evasion to decide the real issue amount to technical misconduct.
 - (6) Failure by arbitrator in his duties and unreasonable delay in conducting the proceedings
 - (7) Delegation of authority to a third person.
 - (8) Perversity.
 - (9) Making private enquiries and basing an award on them.
- b. When an award has been made after the issue of an order by a court, superseding the arbitration or after the arbitration proceedings have become invalid
- c. When an award has been improperly procured or is otherwise invalid. This includes:
 - (1) When any party has been guilty of fraudulent concealment of any matter, which he ought to have disclosed or of willfully misleading or deceiving the arbitrator, the award will be said to have been improperly procured.
 - (2) Invalidity usually means invalidity in law and it is for the court to decide whether the matters were validly placed before the arbitrator. Conditions of a valid award have been described in para 10 and state that to be valid and award.

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- (a) Must be in writing.
- (b) It must comply with any formalities required by the reference.
- (c) It must be made within time.
- (d) It must be signed by the arbitrator and may be witnessed.
- (e) It must be legal ie. must NOT contain any direction, which if incorporated in an agreement, would make the agreement void on grounds of illegality ie it must not direct a “trespass” on another’s land.
- (f) It must be capable of performance.
- (g) It must not exceed the scope of reference.
- (h) It must be certain in meaning.

Note: If an award is set aside, the position reverts to a stage where nomination of an arbitrator was requested. Another arbitrator must therefore be nominated unless, of course the court setting aside the award appoints an arbitrator.

Payment of an Award

24. No award can be termed as Ex-gratis. Payment of an award is of an inevitable nature and should be made without any delay. But if either party wishes to challenge the award, payment should not be made.

General

25. These instructions are issued for the guidance of ALL MES personnel dealing with arbitration cases and are NOT to be quoted as authority in any court of law.

This supersedes Routine Instructions No 651 of 1990.

FORMAL SUBMISSION TO ARBITRATION

Whereas by an agreement in writing. CA No. DW & CE (Air) 77/97 made in between M/S. Poly Construction Co. and the President of the Peoples Republic of Bangladesh represented by DW & CE (Air) Kurmitola Dhaka Cantt, Dhaka. It is provided that all disputes and differences, the settlement of which is not provided for under any other clause of the said agreement and which shall arise, shall be referred to the sole arbitration of an officer of Corps of Engineers serving in MES not below the rank of Col/SE holding an appointment normally tenable by a colonel to be nominated by AHQ, E in C Branch, Wks Dte, Dhaka Cantt, and whereas such disputes have arisen and still continue to exist. Now therefore, We the said M/S. Poly Construction Co. and the President of the Peoples Republic of Bangladesh represented by DW&CE (Air) Kurmitola, Dhaka Cantt, do hereby request to the AHQ, E in C Branch, Wks Dte, Dhaka Cantt, to nominate an arbitrator to hear and determine the said disputes.

As witness thereof, we have here-to-fore set out hands on this..... day of July 2002 as shown below:

Contractor : M/S. Poly Construction Co
Section-2, Block-H
3, House No-13 (3rd floor)
Mirpur-2, Dhaka-1216

DW & CE (Air) Kurmitola
Signature of accepting
Officer on behalf of
The President of Peoples
Republic of Bangladesh

Witness:- 1. _____

2. _____

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ANNEX - B TO
RI NO - 622/2008

(First notice to parties by the arbitrator asking for submission of the case and fixing a date, time and place for the hearing)

REGISTERED A.D.
Brig Gen/Colonel
(Engrs)/CE/SE
Address.
Tel no :
Date :

PF/ /
See Distribution :
ARBITRATION ON CA NO.....

In the matter of an arbitration between the president of Bangladesh represented by the CMES and M/S. Abdus Satter Khan, Ibrahimpur Dhaka Cantt contractors. I hereby give you notice that I have appointed the day ----- month yearathours for proceeding with the reference of the matter arising and of the above contract.

2. The hearing will take place in the Office of the on the aforesaid date and time.

3. The parties shall note that they are required to send copies of their respective submission to each other advance of the hearing. so that the reference may proceed on the date appointed without unnecessary delay in producing evidence.

4. I will receive your submission of the case by day ----- month yearathours at the above address.

5. All documents and records relevant to the case should be produced at the hearing by the parties, having custody of such documents and records, Original documents and records should be produced whenever asked for.

Brig Gen/Col/CE/SE

Distribution:

External:

Action:

M/S.-----

Info:

C M E S-----

Official Arbitrator.

ANNEX - C TO
RI NO - 622/2008

(Notice by arbitrator to parties where either party fails to comply with his first notice).

REGISTERED A.D.
Brig Gen/Colonel

(Engrs)/CE/SE

Address.
Tel no :
Date :

PF/ /

See Distribution :

ARBITRATION ON CA NO.....

Ref : My letter No Dated.....
refers.

1. As your have failed to send copy of your submission of the case required, vide my above quoted letter and have not furnished any explanation of your not having done, now take notice that I have appointed the day ----- month yearathours for proceeding with the reference of the matter arising out of the above contract.
2. The hearing will take place in the office of
3. Please take further notice that if you submit statement of difference and/or claims to me by day ----- month yearathours and if you fail to attend the hearing at the appointed date, time and place, than I shall proceed to write the case EX-PARTE, if requested by the other party to do so

Brig Gen/Col/CE/SE
Official Arbitrator.

Distribution:

External:

Action:

M/S.-----

Info:

CM E S-----

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ANNEX - D TO
RI NO - 622/2008

(Form of application by the arbitrator to a court of law for extension of time to publish his award).

REGISTERED A.D.
Brig Gen/Colonel (Engrs)/CE/SE
Address.
Tel no :
Date :

PF/ /
The District Judge.
Dhaka.

ARBITRATION ON CA NO.....

Sir,

In the matter of the Arbitration Act-2001 and in the matter of an arbitration between the President of Bangladesh represented by CMES..... and M/S. Abdus Sattar Khan, Ibrahimpur, Dhaka Cantt. I was appointed to arbitrate on the disputes arising out of a contract No..... day ----- month yearathours .(copy enclosed).

The first hearing of the case took place on day ----- month yearathours.

An whereas I could not publish the award due to (here state reasons for inability to publish the award).

Now, I therefore, request your honorable court to kindly extend the time for making the said award upto day ----- month year.

I am,
Sir
Yours obediently
Brig Gen/Colonel/CE/SE
Official Arbitrator.

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In the matter of the Arbitration Act 2001 of Bangladesh and an arbitration between :-

Govt of the People`s Republic of Bangladesh represented by
CMES..... Respondent.

AND

M/S. Abdus Sattar Khan, Ibrahimpur Dhaka Cantt, Dhaka- Claimants.

Whereas in pursuance of agreement in writing CA No.-----
---- certain differences arose between the respondent of the one part and the claimants of the other part. And whereas AHQ, E-in-C`s Branch (Work Dte) Letter No.----- dated appointed me to act as the sole Arbitrator to hear and determine the disputes arising out of the said contract agreement.

Now

I.....
.....having taken upon myself the burden of reference. DO HEREBY make and publish this my final award in writing of and concerning the matter so referred to me as follows :-

1. I award and direct that the respondent shall pay to the claimant the amount shown below :-

<u>Item of the</u> <u>Joint Statement</u>	<u>Amount of</u> <u>Claim</u>	<u>Award</u>
Item No.1 Extra Claim on Work.	Tk. 10,00,000/-	1,70,000/-
Item No.2 Establishment cost	Tk. 10,000/-	3,000/-
Item No.3 Legal Expenses.	Tk. 5,000/-	Nil
Item No.4 Interest.	<u>Tk. 10,000/-</u>	<u>Nil.</u>
	Tk.	Tk.

2. I award and direct that the claimant shall pay to the respondent as shown below :-

<u>Item of the Joint Statement</u>	<u>Amount of Claim</u>	<u>Award</u>
Item No. a. TA/DA for Official.	Tk. 25,000/-	Tk. - Nil
Item No. b. Cost of preparation of Arbitration papers.	<u>Tk. 15,000/-</u> Tk.	<u>Tk. - Nil</u> Tk.- Nil

3. I award and direct that as a result of the above award, the respondent shall pay to the claimants a net amount of Tk..... (Tk..... in words.....) only in full and final settlement of the disputes so referred to me.

4. I further award and direct that the final bill duly technically checked/ examined and audited to be paid to the contractor in addition to this award.

5. I further award and direct that each party shall bear its own cost of the reference and that the Respondent/Claimants shall bear the full cost of the Stamps affixed to this award.

As witness my hand day ----- month year .

SIGNED AND PUBLISHED

In the presence of

Witness.

Official Arbitrator

1.-----

2.-----

Note:- In case of Running contracts e.g. conveyance of stores, Terms contracts supply of materials contracts, where there are more than one final bill of the award will be suitably modified to denote whether any or all final bills have been accounted for.

1. Rate of Stamp duty on Arbitration Awards in Bangladesh vide the Stamp Act-1899 (Act 11 1899) (As modified upto 31st July 1983).

- | | | |
|----|--|--|
| a. | Where the amount or value of the property to which the award relates as set forth in such award does not exceed Taka 1000.00 | - Proper Stamp
- duty will be
- 2% of the value
- of consideration. |
| b. | If it excess Taka 1000.00 but does not exceed Taka 5,000.00 | - Twenty five
- Taka |
| c. | For every additional Taka. 1,000.00 or part thereof in excess of Taka. 5,000.00 | - One Taka subject
- to a maximum of
- One hundred
- Taka. |

2. For duplicate Copy :

- | | | |
|----|--|--------------|
| a. | If the duty with which the Original Award is charged does NOT exceed Three Taka the same duty as is payable on the original award. | |
| b. | In any other cases. | - Five Taka. |

SOME USEFUL HINTS ON THE SUBJECT OF ARBITRATION

1. The following procedure should be followed as nearly as possible in giving an award under the arbitration clause embodied in the MES Contract Forms:-

a. The CMES or other officer, who is named as the arbitrator under the arbitration clause, will in the first place satisfy himself that the contractors as well as the Government Officer concerned are both agreed, that the matter is to come before him and be dealt with by him as arbitrator.

b. He should next make sure that the matter referred is clear and that both parties agree to this.

c. In all cases of dispute referred to him for decision, he should give the contractor concerned a hearing as well as the MES. Both sides at his discretion may be asked to reduce their views to writing for record.

d. Before taking up the reference for final decision, the arbitrator should in most cases issue notices to appear before him. It is necessary generally that the parties should be given an opportunity to call witness, if they want to and to produce documents. The question of the admission or not of evidence lies entirely at arbitrator's discretion.

e. It is advisable for the arbitrator to keep note of the proceedings in cases his award is challenged in a Court of Law. These notices, however, are his private property and the parties cannot demand inspection and it is entirely at his discretion, whether he allows such inspection or permits copies to be taken.

f. The arbitrator is expected to act judicially, that is to say, he must be fair to both sides and give each side an opportunity to present their case. He is not however bound by the rules of evidence under the Indian Evidence Act.

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g. It is not necessary, but generally desirable for the arbitrator to give reasons for his award. The award should set out the point or points referred and the arbitrators decision. The arbitrator if necessary is entitled to take legal assistance as to the form of the award, but he is not entitled to seek legal or other outside assistance in arriving at his decision.

h. The award so given by the arbitrator can, if necessary, be filed in the court in accordance with the procedure prescribed in clause- 42 & 43 of Arbitration Act- 2001. In most cases however this is unnecessary, unless it is found that court process is necessary in order to realize the award.

j. If any costs have been incurred, the discretion as to which party is to pay these, lies with the Arbitrator and should be dealt with in his award.

k. If any fees or expense are payable to the Arbitrator he may refuse to publish his award until these are paid. He will then merely give notice to the parties that his award is ready and may be taken upon payment of the amount of fees and expenses.

2. Such an award is conclusively binding on both parties and will not be looked at on the merits by a Court of Law. The award can only be set aside by a Court on proof of misconduct on the part of the arbitrator or that the Award was improperly procured.

3. If a point of law arises, which the Arbitrator is unable to decide, he can seek advice under the provisions of clause- 9,31,32,33, of Arbitration Act-2001

CHAPTER-VI

ROUTINE INSTRUCTION NO 623/2008

OBSERVATION OF SECURITY INSTRUCTIONS

1. It is not considered sufficient merely to include a clause on the “Breach of Security Rules” in the Condition of our Contracts. It is the responsibility of the CMES/GE/AGE where any contractor is working on an Airfield, or in a Depot, or any Defence installation that his attention is specifically drawn to the Security Regulations and he is further warned that he is liable to be punished, under the official secret Act, for any Breach of these regulations
2. In future a register will be maintained in the office each CMES/ GE/AGE and when any contract is entered into of any work in an area, where security Regulations are required to be observed, the contractor concerned and his authorised agents will have the security regulations and the official Secret Act explained to them by an officer, and the signature will be taken on the register certifying that they have been read and understood the regulations and the Act.
3. MES Staff engaged on works in Security Areas will also be warned not to indulge in careless talk, A record will be maintained in the office of CMES/GE about their examining and a full understanding of the Official Secret Act at regular intervals.
4. For the securities in MES residential area follow the instruction vide letter no. 100/148/E-1 dated 05-07-2007 (GgBGm AvevmmK Gj vKvi e“e“vcbv bwwZgij v-2007)

This supersedes Routine Instructions No 681 of 1990.

ROUTINE INSTRUCTION NO 624/2008
CHOICE OF SPECIFICATION

1. The MES Standard Schedule of rates amended time to time provides considerable number of specifications for the type of work that MES is generally called upon to do and the rates in the Schedule are based on these specifications. But no Schedule, however exhaustive, can cover ALL possible combinations of availability of materials and local conditions.
2. Cases may occasionally arise, where none of the specifications contained in the MES Schedule are suitable for particular local conditions. In such cases MES officers preparing the design and estimates should NOT consider themselves bound to follow the specifications given in the MES Schedule of Rates only, but should draw up suitable specifications to meet the special conditions and needs.
3. Where specifications are drawn up, the guiding principle should be that they are an improvement upon the existing specification in the MES Standard Schedule of Rates and contribute to increase in safety or economy in cost of structure.
4. The rate of the special specifications will be carefully calculated and based, as far as possible, on pro-rate from the MES Schedule of rates, but where this is NOT possible, it will be done as for working out a Star price as laid down in General Rules of the MES Schedule of Rates.
5. Where it becomes necessary to adopt a special specification, the same along with the analysis of cost will be submitted to this HQ for information and record, so that it may be considered for inclusion in subsequent revision of the MES Schedule of Rates.

This supersedes Routine Instructions No 686 of 1990.

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**MILITARY ENGINEER SERVICES
BANGLADESH ARMED FORCES**



PROVISIONAL
COMPENDIUM
OF
MES ROUTINE INSTRUCTIONS-2008

PART – VII
DESIGN & SPECIFICATIONS

PUBLISHED BY: AHQ, E IN C'S BR, WKS DTE, DHAKA CANTT.

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COMPENDIUM OF MES RI - 2008**INDEX****PART-VII****DESIGN & SPECIFICATIONS**

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ROUTINE INSTRUCTION NO 701/2008
STANDARDIZATION OF WORKS

1. In order to standardize the works of 3 wings of MES this instruction is issued for strict compliance.

a. **Plinth height.** In all future construction plinths should not be less than 600mm above highest flood level of 1988 and at sites liable to standing water. The cantonments, which were not affected by the flood of 1988 minimum plinth height, will be 600mm from the highest ground level within 100 meter of the building (except hill areas). On sloping sites the buildings will be suitably stepped to avoid unnecessary plinth height and involvement of cost. In this case minimum plinth height shall be 300mm.

b. **Doors and Windows.** Aluminium doors and windows are already included in the type plans for the building mentioned below:

- (1) All Officers Qtr
- (2) Officers Mess and BOQ
- (3) All office
- (4) All high rise building
- (5) Recreation room and CH / DH

2. Separate sanction/approval of E in C for the aluminium doors & windows for the above mentioned buildings will not be required if the items are included in the project estimate of the project technically sanctioned by E in C. Existing wooden/steel doors & windows of above mentioned buildings can be changed to aluminium through maintenance if required after getting approval of better class specification. Separate approval/ Sanction from E in C for aluminium doors and windows for others type bldg will be required.

Ref:

1. AHQ, E in C's Branch, Works Directorate letter no 600/2/Policy/E-6 Dated 28-04-2003.

This supersedes Routine Instruction No 802 of 1990.

ROUTINE INSTRUCTION NO 702/2008
COLOUR SCHEME: MES ACCOMMODATION

1. Newly constructed buildings will not be done in any arbitrary colour. The accepted colour schemes of three services are:

- a. External : White/Off white/grey/cream
- b. Internal : White/Off white/cream.

2. Colour of existing buildings internal/external will not be changed through normal maintenance but every change of colour will be considered as an alteration and dealt with under para-21 (a) (i) of M E S Regulations. This means that it will constitute a minor works to be carried out only after due administrative sanction

3. All colours of existing building other than accepted colours as mentioned in para-1 above may be changed through normal maintenance.

4. Master coat should only be allowed on the external surface of the under mentioned buildings:

- a. "A" and "B" Type Bungalow.
- b. Army, Navy and Air Headquarters.
- c. Flag Staff House, V I P House and buildings over 18 meters.
- d. Staff College (Main Building) important portion of multistoried hospital

5. **Weather Coat/Acrylic Paint.** External new surface of all building should be applied 3 coats of all weather coat paint. Each coat should be approved by GE/AGE and next coat/coats on old surface should be done at an intervals of 5 years. Existing white/colour wash/snowcem can be changed to all weather coats if due, through maintenance fund after getting approval of better class specification.

6. No external decoration will be carried out during the period of 1st March to 31st October.

Ref:

1. AHQ, E in C's Branch, Works Directorate letter no 600/2/E-6 Dated 06-12-2004.

This supersedes Routine Instruction No 803 of 1990.

ROUTINE INSTRUCTION NO 703/2008
SPECIFICATION FOR CONCRETE FLOORS
ROAD AND HARD STANDINGS

General

1. This instruction lays down standard specification for concrete floors bituminous roads and hard standings which will in future be adopted for all MES works.
2. Annexure 'A' to these instructions gives a list of buildings with reference to the floor specification to be followed for each type of work.
3. Where any special work is required which is not covered by this instruction, or where special circumstances require a departure from these standard specifications, a reference will be made to this HQ and special orders obtained.
4. The specifications given in this instruction are suitable only for ground floors and are based on the safe bearing pressures of soil being 10 tones per sqm . Where safe bearing pressure are less, the treatment of the sub grade and thickness of concrete base to be allowed, are matters for local consideration.
5. 2x single layer polythene sheet (wt 1 Kg/6 Sqm) will be laid over well compacted sand filled sub-grade.
6. In multi-storied buildings the finish floor (except ground floor) will be 32 mm thick PCC (1: 2: 4) with neat cement finish for specification 'A' and 6/9 mm thick situ mosaic over 26/23 mm thick PCC (1:2:4) or homogeneous tiles over cement mortar base only for specification 'B' listed below, In case of situ mosaic 5 mm thick and 19 mm wide glass strips should be provided to divide the floor into bays of area not exceeding 1.50 sq. meter.

Ref:

1. AHQ, E in C's Branch, Works Directorate letter no 1000/15/Policy/35/E-10 Dated 09-10-2005.

Floor Specification for Building

7. **Specification – A.** Details are as follows:

Ser	Description of works	Specification of works
1.	Thickness	50mm brick bonded concrete (For ground floor) 32mm thick PCC (For other floors)
2.	Mix	1: 2 : 4 PCC
3.	Aggregate	19mm down graded brick aggregate
4.	DPC	2x single layer polythene sheet (wt 1Kg/6 Sqm)
5.	Base	One layer brick flat soling laying 38mm surrounding gap (* For ground floor only)

8. **Specification – B.** Details are as follows:

Ser	Description of works	Specification of works
1.	Thickness	50mm in one layers for ground floor
2.	Bottom layer (For ground floor only)	In case of situ mosaic 44/41mm thick PCC (1: 2: 4) with 19mm down graded brick aggregate and in case of tiles 31/38mm thick PCC (1: 2: 4) with 19mm down grade brick aggregate. For other floor it should be 23mm thick PCC (1:2:4) in case of mosaic and tiles shall be fixed with cement mortar only without any PCC casting.
3.	Top layer	(1) Situ mosaic-6/9mm thick mosaic (1:1) with imported marble chips (white/ black/ colour) of 3/6mm size (mosaic may be silver grey/white/ grey) over 26/23mm thick PC (1:2:4) (2) Tiles : Homogeneous tiles of approved quality or as shown in the drawing.

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Ser	Description of works	Specification of works
4.	Laying	The top layer shall be laid not more than 24 hours after laying the bottom layer. Excessive tamping shall not be done to bring too much mortar to the surface. In order to get the specified thickness an extra 3mm thickness to be added during laying.
5.	Curing	Curing shall commence as soon as the mosaic is laid using polythene film or building paper with lapped joints and edges temporarily held down with wet sand to prevent evaporation from the surface. The curing should be continued until grinding is commenced.
6.	Grinding	Surface of the mosaic shall be rubbed with pumice stone after three days of laying in case of situ mosaic and 7 days in case of mosaic tiles beginning with the coarse grade. After first cutting, cement grouting of the same mixture of cement and marble dust shall be applied on mosaic surface. The surface shall again be rubbed with pumice stone after two days. The process shall be repeated till smooth and even surface free from any pinhole etc is obtained. Finally, oxalic acid shall be applied with water and rubbed well, till a glossy finish is obtained.
7.	D.P.C	2x single layer polythene sheet (wt 1 Kg/6 Sqm) .
8.	Base.	One laying brick flat soling leaving 38mm surrounding gap.

Specification for Bituminous Road (Class –I)9. **Specification – C.** Details are as follows:

Ser	Description of works	Specification of works
1.	Earth work:	a. As per required Depth b. 95% Compaction to be attained.
2.	Sub-grade	a. 150mm thick Sand filling b. Sand used must be of FM 0.80 c. 95% Compaction to be attained.
3.	Sub-base course	a. 300mm thick bricks aggregate & sand (50% + 50 %.) b. 1 st Over burn bricks aggregate 38mm to 63mm grade. c. Sand (FM-1.50).
4.	Base course	a. 100 mm thick W.B.M b. Over burn bricks aggregate 25 mm to 50 mm grade.
5.	Bituminous tack coat.	a. As per MES Sch of Rates. b. Apply straight run bitumen (hot application) @ 0.97 Kg per Sqm on non-Bituminous surface.
6.	Pavement/Bituminous premix carpeting.	a. 50mm thick premix Bituminous carpeting. b. 19mm down graded crushed stone.
7.	Seal coat	a. Bituminous Seal coat incl painting. b. For seal coat requirement of Bitumen 0.60 Kg/ Sqm i/c sand (FM-2.50) @ 0.01 Cum/Sqm c. For painting requirement of Bitumen 0.70 Kg/Sqm .
8.	Shoulder	Only compacted earth 95% compaction. As required as per site condition.

Ref:

1. AHQ, E in C's Branch, Works Directorate letter no 1000/1/A/E-10
Dated 29-04-2007.

Specification for Bituminous Road (Class –II)10. **Specification – D.** Details are as follows:

Ser	Description of works	Specification of works
1.	Earth work	a. As per required Depth b. 95% Compaction to be attained
2.	Sub-grade	a. 150mm thick Sand filling b. Sand used must be of FM 0.80 c. 95% Compaction to be attained.
3.	Sub-base course	a. 200mm thick bricks aggregate & sand (50% + 50 %.) b. 1 st Over burn bricks aggregate 38mm to 63mm grade. c. Sand (FM-1.50).
4.	Base course	a. 100 mm thick W.B.M b. Over burn bricks aggregate 25 mm to 50 mm grade.
5.	Bituminous tack coat.	a. As per MES Sch of Rates.
6.	Pavement/Bituminous premix carpeting.	a. 50mm thick premix Bituminous carpeting. b. 19mm down graded crushed stone.
7.	Seal coat	a. Bituminous Seal coat incl painting. b. For seal coat requirement of Bitumen 0.60 Kg/ Sqm i/c sand (FM-2.50) @ 0.01 Cum/Sqm c. For painting requirement of Bitumen 0.70 Kg/Sqm .
8.	Shoulder	Only compacted earth 95% compaction. As required as per site condition.

Specification for Bituminous Road (Class –III)11. **Specification – E.** Details are as follows:

Ser	Description of works	Specification of works
1.	Earth work	a. As per required Depth
		b. 95% Compaction to be attained
2.	Sub-grade	a. 150mm thick Sand filling
		b. Sand used must be of FM 0.80
		c. 95% Compaction to be attained.
3.	Sub-base course	a. 150mm thick bricks aggregate & sand (50% + 50 %.)
		b. 1 st Over burn bricks aggregate 38mm to 63mm grade.
		c. Sand (FM-1.50).
4.	Base course	a. 100 mm thick W.B.M
		b. Over burn bricks aggregate 25 mm to 50 mm grade.
5.	Bituminous tack coat.	a. As per MES Sch of Rates.
6.	Pavement/Bituminous premix carpeting.	a. 50mm thick premix Bituminous carpeting.
		b. 19mm down graded crushed stone.
7.	Seal coat	a. Bituminous Seal coat incl painting.
		b. For seal coat requirement of Bitumen 0.60 Kg/ Sqm i/c sand (FM-2.50) @ 0.01 Cum/Sqm
		c. For painting requirement of Bitumen 0.70 Kg/Sqm .
8.	Shoulder	Only compacted earth 95% compaction.
		As required as per site condition.

Specification Road/ Hard standing

12. **Specification – F.** Details are as follows:

Ser	Description of works	Specification of works
1.	Thickness	112 mm in one layer.
2.	Mix	PCC 1:2:4.
3.	Aggregate	25 mm graded brick aggregate
4.	D.P.C.	2x single layer polythene sheet (wt1Kg/6 Sqm)
5.	Finish	3 application of sodium silicate
6.	Base	112mm PCC. (1: 6:12) in normal condition

13. **Specification – G.** Details are as follows:

Ser	Description of works	Specification of works
1.	Thickness	50mm in one layer
2.	Mix	PCC 1: 2: 4
3.	Aggregate	25mm graded brick aggregate
4.	Finish	3 Application of sodium silicate
5.	Base	150mm PCC (1: 6:12) in normal condition

14. **Specification – H.** Details are as follows:

Ser	Description of works	Specification of works
1.	Thickness	150mm in two layers
2.	Bottom layer	100mm thick with PCC (1: 3: 6) using 25mm graded brick aggregate.
3.	Top layer	50mm thick with PCC. (1:1.5:3) using 19mm graded brick aggregate
4.	Reinforcement	This shall consist of M.S Round Bars 6mm dia spaced 375mm centre to centre in both directions.

Conductive Terrazzo15. **Specification – J.** Details are as follows:

Ser	Description of works	Specification of works
1.	Thickness	200 grams of acetylene black shall be mixed per 50 kg of terrazzo mixture. The water content is to be kept sufficiently low to effect a slump of less than 25 mm. 94mm in two layers
2.	Bottom layer	75mm PCC. (1:2: 4) with 19mm down graded brick aggregate.
3.	Top layer	19mm thick terrazzo (1:1) with imported marble chips of 6mm size
4.	D.P.C	2x single layer polythene sheet (wt 1Kg/6 Sqm)
5.	Base	150mm PCC (1:6:12) on minimum 175mm thick sand (FM 1.00)
6.	Curing & Grinding	Same as per specification 'B' (8 e & f) (Situ Grinding Mosaic)

Reinforcement

16. Reinforced with copper wire net 38mm x 38mm mesh made of 20 BG wire both ways. Each 600mm x 600mm section shall contain 18 BG wire both ways and 5mm x 28mm copper dividing strips duly fixed in the floor. In case of jointing of copper net 75mm over lapping to be made. The copper wire should be connected with the main earthing of the building.

Specification - K

17. **Slip Proof Floors.** For rendering the floors slip proof add 250 grams of carborandum powder to 1.36 kg of cement for neat finishing.

Notes:

1. In the case of floors, the bottom layer of concrete shall be poured and uniformly compacted giving required levels and falls. In the case of hard standings further care shall be taken to properly drain the sub grade, before the top layer of concrete is laid
2. Wherever possible, machine- mixed concrete will be used, except when the total mix by one batch of labourers on a particular job is not more than 6 cubic metre for a working day, hand mixing may be allowed.
3. The water content is to be kept sufficiently low to affect a slump of less than 25mm.
4. The grading of aggregate will be strictly according to the Table of aggregates on MES Standard Schedule of Rates.
5. Method of laying concrete in alternate bays or squares shall be used. Base or squares in floors will not exceed 10 sq. meters and shall be bound by hardwood battens or steel side forms firmly embedded to the floor. Alternate bays or squares shall be filled on the following day.
6. In the case of hard standings the width of bays will not be more than 5 meter and length more than 10 Meter.
7. In large buildings e.g workshop, stores, expansion joints not exceeding 12mm will be provided to the full depth of the slab.
8. Expansion joints shall be filled with pre-moulded strips of an approved manufacturer, or with hot bitumen and sand in the proportion 1:3.

9. During construction neither too much mortar will be brought to the surface by beating, nor additional mortar spread to fill depressions and cavities on the surface at the time of floating and finishing. Junctions between floors and walls will be covered.

10. Sodium silicate applications shall be given where provided using sodium silicate solution of the grade as supplied by the manufacturers and approved by the Engineer in Charge. The first application shall consist of 1 part sodium silicate solution to 5 parts of clean water and the second and third shall consist of 1 part of sodium silicate solution to 6 parts of clean water. The first application shall be given over the surface after 10 days of laying the concrete. The second and third applications shall be given after the first and second have dried. Uniform application shall be ensured by using broom and a can fitted with rose.

11. When a floor is required to be given a hard wearing quality as in the case of workshop, a proprietary material known as “Botanic” will be used for surfacing the floor. A layer of 6mm thickness consisting of the following materials for 1 Sq.m of area will be laid over the normal thickness of concrete floor.

- a. 80 kg of Botanic (Iron file)
- b. 80 kg of Portland cement
- c. 80 kg of clean coarse sand.

12. Floors of specifications ‘A’ will have 150mm high skirting of neat cement finish except stairs, toilet and kitchen. Stairs of OR’s JCO’s Qtr, JCO’s Mess, SMBK will be provided with mosaic and toilet and kitchen to be provided with homogeneous tiles as per drg.

13. Floor of specification ‘B’ will have floor and 150mm high skirting of homogeneous tiles except stairs where mosaic will be provided as per drg.

Bath Room/ Toilets of class ‘A’ & ‘B’ Quarters

18. White / Coloured/design tiles to be provided up to false ceiling.

Bath Room/ Toilets of class ‘C’ to ‘G’ Quarters

19. White / Coloured/design tiles to be provided upto false ceiling.

This supersedes Routine Instruction No 801 of 1990.

SPECIFICATION TILES & MOSAIC

Ser.	Description of type building	Specification to be adopted for floor	Remarks
(a)	(b)	(c)	(d)
1.	<u>Married Officers Qtr</u>		
	a. 'A' & 'B' type Qtr	B	<p>a. Floor of homogeneous coloured/ white tiles with Skirting as per drg. except in baths/ WC's, kitchen, servant and store room.</p> <p>b. Floors in baths/WC's will have homogenous coloured/white tiles with skirting of white/ coloured/ design tiles upto false ceiling .</p> <p>c. Kitchens will have floor of homogeneous tiles/marble tiles including skirting/shelves of tiles/marble tiles as per drg.</p> <p>d. Servant and store room will have homogeneous tiles mosaic/stonolithic/neat cement finish as per drg.</p>
	b. Officers Qtrs (except 'A' & 'B' type) Officers Messes, BOQ's, Clubs and Offices	B	<p>a. Floors of specification 'B' will have homogeneous tiles floor with 150mm high skirting except stairs where mosaic will be provided.</p> <p>b. Dress room and kitchen will have homogeneous coloured/ white tiles floor & skirting incl shelves of kitchen .</p> <p>c. Floors in baths / toilets will have homogeneous coloured / white tiles . with skirting upto false ceiling.</p> <p>d. Servant and store room will have stonolithic /neat cement finish as per drg.</p>
2.	JCO's Qtr, OR's Qtrs SM BK CH/DH	A & B	<p>a. Floors of specification 'A'</p> <p>b. Skirting in SM Barraks, toilets of JCO's and OR's Qtrs and JCO's clubs will have homogeneous coloured / white tiles upto false ceiling/ as per drg of the CA.</p> <p>c. Stairs of JCO's Qtr, OR's Qtr , JCO's club and SM BK, Cook House,Pantry, Corridor, washing place of SM BK will be provided with silver grey mosaic floors and skirting as per drg.</p>

Ref:

1. AHQ, E in C's Branch, Works Directorate letter no 600/2/Policy/E-6 Dated 11-11-2002 & 1000/15/Conference/E-10 dated 05-03-2007.

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(a)	(b)	(c)	(d)
			d. Kitchen of JCO's Qtr and Recreation room Dining hall and passage to cook house/SM BK will be provided with homogeneous coloured/ white tiles floor and skirting as per drg of the CA.
3.	NCO's Club	A& B	-- Ditto-
4.	Rest House	B	--
Hospitals			
5	Operation Theatre	J	-
6.	Delivery Room	J	-
7.	X-Ray rooms and Electro Therapy rooms.	B	Specification J to be followed if X-Ray is to be used for therapeutic purpose.
8.	Wards, labour, Treatment room, Out patients room, Dispensaries, Specialists rooms, Corridors, Halls, Sterilizing room. Waiting lobbies. Laboratories, Clinical side rooms. Admission .Unit plaster room, Opthamology, Otology. Mortuary and Postmortem rooms. Rhinology. Sanitary Annexes. Occupational and Physiotherapy units	B	
9.	Admin Blocks	B	
10.	Animal House	A	
11.	Preparation and Cooking areas in kitchen, Ramps for entrances.	A& G	
12.	Stores Anti Gas, Armoury room , Band instruments rooms battery rooms, Bread and Meat, Central Hospital, Coal and Coke Yard, Clothing, Cold Dispensary, Drum, Engineer Equipment, Equipment, Field works, General kit, Mobilization Equipment, Music, Radio Telephony, Petrol Ration (Expense). Ration (Regimental) Reservists Signalling, Equipment S.A.A. Sports, Squadron station Survey Equipment ,Tech (Coy) Tech (Sec) Weapon Trg, Workshop, Map Furniture, Stationery, P.T. Equipment, Teaching Equipment, Laundry, Lubricating Oil and Grease.	A	Laundry : Specification K to be followed in areas which get wet during washing. Lubricating Oil & Grease Store : Three coats of sodium silicate shall be applied in the following manner : The first application shall consist of 1 part sodium silicate solution to 5 parts of clean water and the second and third shall consist of 1 part of sodium silicate solution to 6 parts of clean water. The first application shall be given over the surface after 1 days of laying the concrete. The second and third application shall be given after the first and second have dried. Uniform application shall be ensured by using broom and a can fitted with rose.

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(a)	(b)	(c)	(d)
13.	Company ,Gun park ,shell, spare Sheds.	F	
14.	Sports and Recreation Canteens, Theatres Cinema s, Squash Courts/ Fire Courts, Courts , sports pavilions, Dressing , rooms.	A	
15.	Instruction Band practice rooms, Battle practice ranges (Indoor), Children's School Rooms, Drill Halls, Drill sheds, Gas chambers, Instruction Room (Technical/ Education), Instruction Room (Mechanical/ Electrical/ Dental/ Medical/Sand model/General). College Halls, Lecture Theatre, Instructional Labs.	A	
16.	Unit Trades Mans Shops Armourers shops, Blacksmiths shops, Farriers shops, General purpose shops, Instructional shops Moulders shops, painters shops , saddlers shops, surveyors shop, shoe-makers shops, Tinsmiths shops, Tailors shops, Printing press , photo copying rooms, Machine shop, Forges Drawing offices, Electrical Fitters Shops.	A	
17.	Workshops for light repairs	F	
18.	Workshops for heavy repairs.	H	
19.	General Recreation Rooms, Dining Halls, Dining Rooms, Darbar shed, Offices, Telephone Exchanges, Boiler Houses, Wireless Room (Sigs). Iron Rooms ,Defence post Guard Houses, Detention Rooms & Cells Slaughter Houses	B A	
20.	Cook Houses, Dhobi Ghats	A & G	

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(a)	(b)	(c)	(d)
21.	Institutes	A & B	Floors of B specifications to be provided in main room, hall, NCO'S Room, Scullery & survey, labs, Toilet.
22.	M.I Rooms, Child Welfare Centres and Religious Buildings	B	
23.	<u>E/M</u> Air Conditioning plant room Switch Stations Switch Houses, Transformer Houses ,Power Houses, Meter Houses,Fuel Oil Houses, Pump Houses.	A	
24.	<u>Vehicle and Gun</u> Shed, Fire Engine Houses , Hard standing for Vehicles of Gun Class- 9	F	
25.	Cycle sheds, Garages for officers Messes and Qtrs.	A	
26.	Garages for Vehicles of Class 24, Hard standing for Vehicles of Class- 24.	D	
27.	Hard standing of tracked Vehicles	J	
28.	Ambulance Garages	F	With three coats of Sodium Silicate in the manner as narrated in remarks of SL No. 12.
29.	<u>Veterinary</u> Operation Theatres	F	-Ditto-

Refs:

1. AHQ, E in C's Branch office order no. 150 dated 02-02-2007.
2. Board of officers submitted vide CMES (Air) Kurmitola letter no. PF/80032/89/E-1 dated 29/05/2007.

ROUTINE INSTRUCTION NO 704/2008
CLEANING OF MOSAIC - FROM MAINTENANCE BUDGET

1. In future cleaning of existing mosaic floor/skirting should not be done with pumice stone by machine or manually.
2. The smoothness and brightness of mosaic should be maintained by sweeping and cleaning regularly by the users. If any mosaic floor gets dirty for lack of regular sweeping/cleaning, the same should be cleaned by hot water mixed with quality detergent powder or any reagent little desalt / harpic. If the mosaic floor of any toilet becomes rough or creates potholes due to long use, the same may be reconstructed under normal maintenance.
3. This instruction is applicable for all sorts of buildings viz office, hospital, residential buildings etc held under the maintenance load of MES.

This supersedes Routine Instruction No 804 of 1990.

ROUTINE INSTRUCTION NO 705/2008
RECORD OF BUILDING AND THEIR NUMBERING

1. A record plan of every building and other structures on his charge will be maintained in the office of the GE and independent AGE who will be responsible that such plans are corrected up to date. The internal water, electrical or sanitary installations, where these exist, will also be shown in these plans; Separate plans for internal installations may also be maintained. if considered necessary.

2. Every main building will have a distinguishing number conspicuously painted there on, subsidiary buildings will be numbered with number of the main building followed by a letter using the following code: -
 - A -- Cook house
 - B -- Latrines
 - C -- Lavatories
 - D -- Urinals
 - E -- Lamp rooms
 - F -- Servant Qtr
 - G -- Garage
 - H -- Enclosure walls of fence.
 - J -- Covered passage.

3. Each room in a regimental building will be numbered and its area cubic contents and the purpose for which it is used, painted on one door.

4. Doors, windows, CSWs and other fixtures in all buildings will invariably be numbered. These numbers will be painted using 38mm letters. Numbering will be in sequence commencing from the left hand side of the building and shall be painted on the inside of chowKats on left hand top corner.

5. Where numbering does not exist, this will be taken in hand for early completion.

This supersedes Routine Instruction No 816 of 1990.

ROUTINE INSTRUCTION NO 706/2008
ANNUAL EXCHANGE OF REGISTERS ETC

1. The attention of all concerned is drawn to paras 342 & 345 of MES Regulations. The following records will be maintained in the offices of E in C, DW & CE, CMES, GE and Independent AGE. These will be kept up to-date by annual exchange. The respective GE/AGE will correct the copies meant for E in C and other offices up to the date given along side and these should reach them by the dated given in brackets. Where no change has occurred throughout the relevant year, exchange will not be made but a NO CHANGE certificate will be sent.

Ser	Description of works	Relevant date
1.	Register of Buildings	30 June (1 Nov) up to DW & CE
2.	Cantonments and Airfield Gazetteers	30 June (1 Sep)
3.	Road Communication plans	30 Sep (1 Dec)
4.	Cantonment Plans (including Airfield and Landing Gd. (plans)	30 Sep (1 Dec)
5.	Electricity Distribution plans	30 Sep (1 Dec)
6.	Water Distribution plans	30 Sep (1 Dec)
7.	Cantonment plan showing sewerage layout controlled by central sewerage plants	30 Sep (1 Dec)
8.	Cantt plan showing irrigation Water Supply	30 Sep (1 Dec)
9.	Standard Cantonment plans for Staff Use	30 Sep (1 Dec)

Ref:

1. Routine Instruction No 851 of 1990.

2. The following notes are given for guidance in preparation and submission of these records:

a. **Register of Buildings.** This is maintained in BAFW's 2167 and 2168. Where printed copies are not available, forms manuscript through typing will be used. In addition to completing the data on BAFW-2168, a running total of values from year to year will also be compiled on the proforma shown on Annexure 'A'. This proforma will be fixed to the inside of the cover viz BAFW-2167. The GE/AGE will furnish annually by the dates specified in para 1 above, a corrected copy to each office concerned, receiving the old copy in return. Remarks columns of BAFW-2167 will be utilized to give additional information like additions/ alterations etc. in the building with the authority approving the work.

b. **Cantonment and Airfield Gazetteers.** These will be maintained on loose sheets bound in a file cover. Proforma will be Manuscripted according to the instructions issued by E in C. The Gazetteers will contain all the information, which may represent a true picture of the Cantonment and the Airfield. These will be exchanged as given in para 1 above.

C. **Road Communication Plans.** These plans will cover roads which are outside Cantonments and are maintained by the MES. Roads within Cantonment are covered by Cantonments Plans (See para 3 below). The plan will give for each road the following information and will be to a scale of 10 Cm to 1.61 metre.

(1) Width of road

(2) Type of surface.

(3) Spans of bridges of 9.14 metre and above, with brief particulars of the type of construction like length, clear road width and load classifications etc. etc. Metalled roads will be shown in continuous double lines and unmetalled roads will be shown in dotted lines. The plan will be folded and placed loose in foolscap file cover on which the name of the area will be shown.

3. **Cantonment Plans**

a. These plans will be maintained on Survey of Bangladesh cloth backed maps, to a scale 40cm to 1.61 KM. The plan will be folded

foolscap size with stiff end boards. Cantonment plans (which term also means airfield and landing ground plans and plans for other self contained projects) will show the roads and buildings in the following distinguishing colours.

Military - Red
Civil - Blue
Cantonment - Green
Civil - Yellow

b. Metalled roads will be shown in continuous double dotted lines and unmetalled roads will be shown in dotted lines. Where no suitable Survey of Bangladesh map exists, prints of Cantonment Plans of as nearly the required scale as possible will be used as a temporary arrangement only.

c. Whenever a new road has been completed, a corrected plan of it will be sent by the respective CMES to Survey of Bangladesh.

d. The colourings of buildings and roads on new cantonment plans issued by Survey of Bangladesh will be carried out departmentally. The distinguishing colours given above will be used. The Survey department will send copies of maps direct to the respective GE/AGE who will colour these and send one copy to the E in C.

4. **Electricity Distribution Plans.** A Diagram of the MES distribution system will be maintained on tracing paper to the same scale as the Cantonment (etc) plans. North point will be shown on this tracing and it will be super-imposed on the Cantonment plan. The plans will be folded and placed loose in foolscap file covers on which the name of the area will be shown. One file cover will be used for each area or separate distribution system. The plans will show the out-put capacity and out-put/voltage of generating stations and sub-stations, and in a tabulated form the nominal area and numbers of conductors in feeders and distributors and connected loads of buildings or group of buildings. Underground cables will be shown in dotted lines. Individual poles and service lines or house connections will not be shown on these plans.

5. **Water Distribution Plans.** These will be maintained as the Electric Distribution plans are maintained. These will show number and output of pumps in pumping stations, the sizes of pipes, capacity of reservoirs and height above mean sea level of pump houses, reservoirs

and source of supply. Rising mains should be distinguished from gravity lines.

6. **Sewerage Layout Plans.** These will be traced on linen cloth to the same scale as the Cantt. Plan on which they will be super-imposed. These will be folded as electricity distribution plans and will show the section, gradient and invert levels of the sewer.

7. **Irrigation Water Supply Layout Plans.** These will be prepared and folded as sewerage layout plans and will show all pucca and kacha channels in distinguishing colours. The direction of flow in also to be indicated by arrows.

8. **Standard Cantonment Plan for Staff Use.** These plans will be to a scale of 20cm to 1.61 KM and will be maintained in addition to 40cm to 1.61 KM Cantonments plans. For all Cantonments, the following three types of maps to this scale are required: -

a. Cantonment Plan showing the following:

- (1) All railway and roads (with names).
- (2) Name of lines.
- (3) Buildings(specifying building numbers).
- (4) Cantonment boundary showing boundary pillars with pillar numbers.
- (5) Grids corresponding to 2.54cm to 1.61 KM survey map. The Grids will not be marked completely across the map but only in areas where a blank space is available, so that the grids may be completed in case the maps are required, for internal security purposes.
- (6) Small insets of nearby detached permanent camps/ installations etc. may be shown to the same scale if possible.

b. **Water Supply Layout.** This will show the main water supply layout of 50mm and over water mains but need not show details of roads, buildings etc. except that certain cross roads, important land marks etc. Will be shown in order that one can orient one-self on the map. The main reason for omitting roads is that most of the pipelines run along a road and would create confusion on a map. The map will include:

- (1) Actual sizes of pipes and sources of supply, If tube wells exist, their maximum yield/hour will be shown.
- (2) Pump Houses and reservoirs giving capacities of pumps and reservoirs.
- (3) Rising and distribution mains, rising mains will be coloured red.
- (4) In case the pump houses are far away from the Cantonment a smaller scale inset may have to be made in order to show the rising main layout etc

c. **Electrical Layout.**

- (1) As in the case of water supply layout, this will only show the electrical layout up to feeder mains showing details of power stations, emergency stations and distribution layout.
- (2) A. C. (L.T.) lines will be left uncoloured on the blue prints and D. C. (L. T.) lines will be shown in yellow colour. H. T. lines will be shown in red colour. Voltage of H. T. in K V will be shown along the H. T. Lines.
- (3) Capacities of transformers where they exist should be shown in each substation or Power House.
- (4) In case an H. T. line is brought in from great distance, a smaller scale inset may have to be made in order to show the incoming H. T. line.

d. Each map will show the scale in Km and Metre North point will be indicated. Standard symbols and abbreviations for Cantonments maps will be used. The master plans (on tracing paper of the maps will be maintained in the office of the GE/AGE who will be responsible that the master plan is always kept up to date. Blue prints of these maps will be supplied to E in C, Director of Works/Chief Engineers, and CsMES etc. as and when required by them. On the blue prints of the Cantonment maps, temporary buildings will be coloured yellow, Distinguishing colours laid down in para (iv) above will be used for the roads. The above maps are only required for staff purposes and CsMES/GEs may, if they so desire maintain maps to other scales for their own special use.

9. In addition to the above, the following records will also be maintained and kept up to date in the offices of GE/AGE. These records, however, do not require the annual interchange.

a. **Road Registers.** These Registers will show separately for each road, the class of road, length, width, expenditure on new construction (capital outlay) and annual expenditure on maintenance. Road graphs showing the progress of remetalling etc. will also be maintained in these registers.

b. **Internal Wiring Diagrams.** These will be prepared for every electrified building and registered with the latter of lines and building numbers as in the Register of Buildings. The record diagrams shall show the following with conventional signs as specified in B.S.S. No. 108 P. 447.

- (1) The course of all sub-mains and their sizes.
- (2) Main and branch distribution boards, meters and main switches.
- (3) The position of all fans, lamps, wall sockets and other fittings;
- (4) Branch wires need not be shown but the course of all sub-circuits must be indicated clearly on the wiring plan and lettered or numbered to correspond with the letters or numbers on the labels attached to the distribution boards. In addition, the plans should show in tabular form, the points (defined by letters or numbers to agree with the plan) on each sub-circuit.
- (5) **British Standard Specifications.** A copy each of B.S.S. Nos. 308- Engineering Drawing practice and 1192-drawing office practice for Architects and Builders, will be maintained in every drawing office

This supersedes Routine Instruction No 851 of 1990.

REGISTER OF CIVIL/MILITARY BUILDINGS

Area

Garrison

Proforma Showing Running Total of Values from Year to Year

Ser	Type of buildings	Values of buildings	Difference during the year	
			Plus	Minus
(a)	(b)	(c)	(d)	(e)
1	a. 5 yrs old & under Kacha and Pucca construction b. Over 5 yrs old Pucca construction (B-Bricks, Stone or concrete). c. Over 5 yrs Katcha construction (Mud Bricks)			

New total	Internal electric installation	Difference new during the total year		New total	Remarks
(f)	(g)	(h)	(j)	(k)	(l)

ROUTINE INSTRUCTION NO 707/2008
CONCRETE COVER

Concrete clear cover will be provided as given in the following table:

Ser	Member	Position	Cover	Remarks
1.	All RCC Works	Earth faced	75mm	
2.	All RCC Works	Submerged in saline water	75 mm	
3.	All RCC Works	Water faced	75 mm	
4.	a. All RCC Beams	Within 5 miles of coast but not exposed to weather	38 mm	
	b. RCC Slab	-Ditto-	19 mm	
5.	a. RCC Beams/ Columns	Normal	38 mm and 19 mm minimum for stirrups.	
	b. RCC Slab	-Ditto-	19 mm	

Note:

1. This is a general instruction. For detail and more precise value approved drawing to be followed.

Ref:

1. AHQ, E in C's Branch, Works Directorate letter no 1000/15/Policy/E-10 Dated 23-11-2004.

This supersedes Routine Instruction No 805 of 1990.

ROUTINE INSTRUCTION NO 708/2008
EXTERNAL OR OCCASIONAL LOAD ON
BUILDING STRUCTURE

1. **Load.** Loads that act on structure can be broadly clasified into two categories. There are vertical/gravity loads and lateral loads. Gravity loads that act on structure are dead and live loads. Lateral loads are mainly wind load and earth quake load.
2. **Gravity Loads.** There are mainly dead and live loads. Dead loads are constant in magnitude and fixed in location. Live loads consist chiefly occupancy load in buildings and traffic loads on bridges. Design of buildings and component for gravity loads shall confirm to the requirements of concrete section. Gravity loads such as dead load and live loads applied to the floors or roof of a building shall be determined properly for accurate design of structure. For more detail elaboration and knowledge study Bangladesh National Building code (BNBC) 1993 part-6 chapter-2 may be followed.
3. **Lateral Loads.** Every Buildings, structure or Portions thereof shall be designed to resist lateral load effects, such as those due to wind or earthquake forces in compliance with the requirements prescribed in Building code.
 - a. **Wind Load.** The minimum design wind load on buildings and components shall be determined based on the velocity of the wind, the shape & size of the buildings and the terrain exposure condition of the site. For the overall design of the structures, the general design requirement as specified in BNBC-1993, Part-6, chapter-02 to be followed.
 - b. **Earth Quake Load.** Minimum design earth quake forces for buildings, structures or components thereof shall be determined based on the seismic zoning map of Bangladesh provided in BNBC. Considering the severity of the probable intensity of seismic ground motion and damages, Bangladesh has been divided into three seismic Zones, ie Zone-1, Zone-2 & Zone-3 of which Zone 3 being the most severe. Earth quake forces and their effect on various structural elements shall be determined by using either a static analysis method or dynamic analysis which ever is applicable as per BNBC. For more detail analysis and knowledgeable study BNBC, Part-6, chapter-2 may be followed.
4. This supersedes Routine Instruction No 807 of 1990.

ROUTINE INSTRUCTION NO 709/2008
GLAZING IN METAL SASHES AND
USE OF FROSTED GLASS PANES

1. Steel doors and windows are now being widely used in the construction undertaken by the MES.
2. Ordinary putty for glazing in metal sashes is not suitable. Ordinary putty in future will be mixed with 5% of red lead for glazing of metal sashes.
3. Glazed bathroom window will be provided in future with frosted or opaque sheet glass.

This supersedes Routine Instruction No 811 & 813 of 1990.

ROUTINE INSTRUCTION NO 710/2008
MATERIALS & PILE INTEGRITY TESTING

Refs:

- A. AHQ, E in C's Branch letter No. 1100/25/Policy/E-11 Date 23 May 2006.
- B. AHQ, E in C's Branch letter No. 1100/31/E-11 Date 31 May 2008.

1. To ensure smooth dealings with welfare related matters of MES personnel following detailed policies/instructions are to be followed by all concerned:

- a. **Policy for material sample collection & testing** shown as Annex 'A'.
- b. **Policy for use & conducting of Pile Integrity testing machine** shown as Annex 'B'.

2. Should there be any amendment by the competent authority of these polices/instructions published by the RI No. 710/2008 is to be updated by all concerned as per amendment.

g'vUui qvj tUwos m'v'uj vbePb I tc0tYi bwiZgvj v

eivZ t

- K| tmbvm` i, B Bb wm0i kvLv, cZ`Cwi` Bi cT bs- 1100/1/B-11 Zwi L 31 tg 1998 wLt|
- L| tmbvm` i, B Bb wm0i kvLv, cZ`Cwi` Bi cT bs- 1100/1/B-11 Zwi L 31 tg 2000 wLt|
- M| tmbvm` i, B Bb wm0i kvLv, cZ`Cwi` Bi cT bs- 1100/cwj wm/B-11 Zwi L 29 Gucj 2001 wLt|
- N| tmbvm` i, B Bb wm0i kvLv, cZ`Cwi` Bi cT bs- 1100/1/B-11 Zwi L 26 A±vei 2002 wLt|
- O| tmbvm` i, B Bb wm0i kvLv, cZ`Cwi` Bi cT bs- 1100/25/B-11 Zwi L 28 btf'af 2005 wLt|

1| fwgKv t Gg B Gm G e'eüZ wlogP mvgM0i ,YMZgvb cixqIv `tctqI cZ`KvRi gvb Dbz Kivi c0t'm g'vUui qvj tUwos j`veI Uixi fwgKv wekI ,i"Z; enb Kti | j`veI DfIk` ev`evqtb m'v'uj cixqIvi ,YMZgvb thgb fwgKv ivtL tZgvb cixqIvi Rb` Dchyß m'v'uj g'vUui qvj h_vmgtaq Dc`vcb I vbePtb wekI ,i"Z; enb Kti | mwK m'v'uj g'vUui qvj vbePb Ges tUwos Gi Rb` m'v'uj Z Ae`vq j`veI tc0tbi ,i"Z; Ab`KvhP

2| DfIk` t tUwos m'v'uj vbePb I j`veI m'v'uj Z Ae`vq tc0tYi ve`wi Z bwiZgvj v c0qY Kiv|

3| ve`wi Z bwiZgvj v t g'vUui qvj tUwos m'v'uj vbePb I tc0tYi ve`wi Z bwiZgvj v vbtæ c0E ntj v t

K| tUwos m'v'uj vbePb I c0Z/msM0 KiY t

(1) KsqU umij 0vi c0Z t bKkv I Pr³cTf i webt`R tgvZvteK Dbzgvfbi imtgU, GmM0U (Saturated surface dry) Dchyß GdGg wek0 ewj 0viv hf_vchyß cwb/imtgU Gi AbcyZ w`tq GGmUGg 0'v0W0KsqU umij 0vi tgv0 (300 wgtugt D'PZv Ges 150 wgtugt Wqv wek0) Gi gva`tg GKB mstM 6wU umij 0vi %Zix Ki tZ nte | tgv0 Gi gta` 3`#i (c0Z`#i 100 wgtugt Kti) KsqUwS Kti 16 wgtugt e`vm 600 wgtugt j`af GgGm iW 0viv c0Z`#i 25 evi i`wgs (Ramming/stroke) Ki tZ nte | c0Z`#i iW 0viv i`wgs Kivi cti ivevi 0viv %Zix nvZw0 (Standard mallet for preparation of cylinder) 0viv tgv0 Gi evBti 10 ntZ 15 evi g`yAvNvZ (Taping) Ki tZ nte | umij 0vi KsqUwS tkI nI qvi cti Gi Dcmi fVM mgvb Ki Zt cwbi ev`0uqKiY (Water evaporation) tivaKti Gi Dcmi fVM k³ cw0K XvKbv 0viv tXtK Kæubgß (Vibration free) k³ RvqMq ivL tZ nte | AZtci 24 ± 8 N0v cti

Ksiqu wmwj Ūviu tgv̄i t_ik̄ tei K̄i cwb̄tZ Wjēq̄ ti tL̄ w̄KDwi s̄ Ki tZ̄ n̄te | Dc̄tiv̄³ Kiv̄h̄ w̄RB/̄Z̄š̄i Ḡw̄R̄B̄M̄t̄Yi c̄Z̄[¶] Z̄Ēj̄eav̄t̄b̄ m̄=ūv̄ b̄ Ki tZ̄ n̄te | w̄K̄v̄P̄r̄³ tZ̄ D̄t̄j̄ Ē b̄v̄ _v̄K̄t̄j̄ t̄K̄v̄b̄ Aē[̄] t̄Z̄B̄ Ksiqu wmwj Ūvi %Z̄ixi mgq̄ Admixture ē[̄]envi Kiv̄ h̄tē b̄v̄ Ges̄ w̄m̄tḡU, ewj̄ I Ḡw̄M̄M̄t̄Ūi Ab̄c̄v̄Z̄ K̄t̄V̄i f̄v̄tē ḡv̄b̄tZ̄ n̄te |

(2) **GgGm iW msM̄h̄** t Ultimate strength, Yield strength, Elongation and Diameter w̄b̄Ȳq̄i t̄¶̄t̄Ī m̄v̄B̄t̄Ū Av̄b̄q̄ȲK̄Z̄ j̄Ū n̄tZ̄ c̄ŪZ̄ W̄v̄q̄w̄ḡŪvi īt̄Wī t̄¶̄t̄Ī 4w̄Ū iW̄ (c̄ŪZ̄w̄Ū 600 w̄gt̄w̄gt̄ j̄=̄¶) w̄b̄ēP̄b̄ Ki tZ̄ n̄te | tL̄q̄v̄j̄ īv̄L̄t̄Z̄ n̄te th, w̄b̄ēP̄b̄K̄Z̄ c̄ŪZ̄ ŪK̄iv̄ īt̄W̄ th̄b̄ iW̄ c̄ŪZ̄K̄v̄ix̄ t̄K̄v̄=ūv̄b̄xī d̄M̄ ḡv̄K̄P̄ēt̄Ūī b̄vḡ Ī īt̄Wī t̄M̄Ū̄ D̄t̄j̄ Ē[̄] v̄t̄K̄ |

(3) **ewj̄ msM̄h̄** t GgBGm ō^{v̄}Ūw̄[¶]q̄m̄w̄D̄j̄ Aē ti B̄Ūm̄/P̄r̄³ c̄t̄Ī ī w̄ēb̄t̄[̄] R̄/ b̄K̄k̄v̄ Ab̄h̄v̄q̄x̄ m̄v̄B̄t̄Ū Av̄b̄q̄ȲK̄Z̄ ewj̄ ī[̄] ε̄ (Stack) n̄tZ̄ c̄ŪZ̄ m̄^{v̄}ū̄t̄j̄ ī R̄b̄[̄] K̄ḡc̄t̄¶̄ 02 t̄K̄w̄R̄ ewj̄ msM̄h̄ K̄ī t̄ḡv̄Ūv̄ c̄w̄ŌK̄ ēv̄ K̄^{v̄}b̄f̄^{v̄m̄} K̄v̄c̄t̄ōī ē^{v̄}t̄M̄ m̄sī ¶̄Ȳ Ki tZ̄ n̄te |

(4) **ḡw̄Ū msM̄h̄** t j̄^{v̄} t̄ēī w̄b̄R̄[̄] c̄ŪZ̄w̄b̄iā K̄Z̄R̄ w̄d̄ī t̄ŪŌ m̄=ūv̄[̄] b̄ cēR̄ j̄^{v̄} t̄ēī Ūix̄ c̄ix̄ ¶̄vī R̄b̄[̄] t̄ŪŌ m̄^{v̄}ū̄t̄j̄ msM̄h̄ Ki tē |

L | **c̄Ūq̄v̄R̄b̄q̄ h̄š̄c̄w̄Z̄** t GgBGm c̄K̄ī mḡ¶̄nī _ȲM̄Z̄ḡv̄b̄ mḡb̄Z̄ īv̄L̄vī[̄] t̄[̄] q̄b̄ǣw̄ȲZ̄ b̄^{v̄} b̄Z̄ḡ h̄š̄c̄w̄Z̄mḡn̄ c̄ŪZ̄w̄Ū w̄RB/̄Z̄š̄i Ḡw̄R̄B̄ dī t̄ḡk̄b̄mḡ¶̄n̄ ē[̄]envi ēv̄[̄] Z̄v̄ḡj̄ K̄ t

- (1) 300 w̄gt̄w̄gt̄ D̄^{v̄}P̄Z̄v̄ Ī 150 w̄gt̄w̄gt̄ W̄v̄q̄w̄ēw̄k̄Ō ḠḠm̄ŪḠḡ ō^{v̄}Ūw̄[¶] Ksiqu wmwj Ūvi ^Z̄ixi t̄ḡv̄ī - 6w̄Ū |
- (2) 600 w̄gt̄w̄gt̄ j̄=̄¶ Ges̄ 16 w̄gt̄w̄gt̄ W̄v̄q̄w̄ēw̄k̄Ō t̄Ūī=ū̄s̄ īW̄ - 2w̄Ū |
- (3) ō^{v̄}Ūw̄[¶] q̄v̄ēvī ḡ^{v̄} t̄j̄ Ū (Head weight = 1.25 ± 0.50 cvDŪ) - 01 w̄Ū |
- (4) c̄v̄w̄b̄ Ī w̄m̄tḡŪ Gī Ab̄c̄v̄Z̄ w̄b̄q̄š̄t̄Ȳī R̄b̄[̄] ^{v̄}ū̄ t̄ŪŌvī - 01w̄Ū |
- (5) w̄m̄f̄ t̄k̄K̄vī (w̄m̄f̄m̄n̄) - 01 t̄m̄Ū |
- (6) wmwj Ūvi w̄KDwi s̄ U^{v̄}s̄K̄ - 01w̄Ū |
- (7) t̄k̄v̄t̄f̄j̄, Ūt̄q̄j̄, t̄ŌŪGR̄, ^{v̄}c̄ Ges̄ ī^{v̄} j̄^{v̄} vī c̄ŪZ̄w̄Ū - 1w̄Ū K̄ī |
- (8) Ḡj̄ -500 t̄n̄f̄x̄ w̄W̄D̄w̄Ū m̄w̄j̄ D̄k̄b̄ ē^{v̄} t̄j̄ Ÿ̄ Ā^{v̄} ēv̄ B̄t̄j̄ K̄w̄ŪK̄ ē^{v̄} t̄j̄ Ÿ̄ w̄W̄v̄R̄Ūj̄ - 01w̄Ū |

Dc̄tiv̄³ h̄š̄c̄w̄Z̄mḡn̄ msM̄h̄ cēR̄ c̄ŪZ̄w̄Ū dī t̄ḡk̄b̄ (w̄RB/̄Z̄š̄i Ḡw̄R̄B̄M̄Ȳ) mḡv̄c̄b̄x̄ c̄ŪZ̄t̄ē[̄] b̄[̄] w̄L̄j̄ Ki tē Ges̄ B̄ B̄b̄ w̄m̄Ōī K̄w̄ī M̄ix̄ c̄ix̄ ¶̄K̄[̄] j̄ dī t̄ḡk̄b̄ c̄w̄ī[̄] k̄¶̄bī mḡq̄ c̄ix̄ ¶̄v̄ cēR̄ Ḡ m̄s̄p̄v̄š̄-c̄ŪZ̄t̄ē[̄] b̄[̄] w̄L̄j̄ Ki tē |

(4) gwU t gwU cix¶v (Soil test) msµvš-tUwós m'váj j'vte wbr^-cúZvwa mveavZvi mvt_ enb wbuōZ Kiþe|

P| tUwós m'váj GgBGm g'vtUwi qvj tUwós j'vte tcō¶Yi/tcōQvþvi mgqmPx tµvocĪ ŌMŌ AvKvþi mshy³ Kiv ntjv |

Q| wetkl mZKZv t

(1) cKí KvþR e'envi i Rb' Dbžgvþbi wmtgU e'envi KiþZ nþe Ges Zv GKgvþmi tekx_`vtg_`vgRvZ Kiv hvte bv|_`vgRvZKZ wmtgU First in first out wfwĒþZ e'envi KiþZ nþe| tKvb Ae`vtZB tLvj v AvKvþki bxtP wmtgU o'wks Kiv hvte bv| cōqvRbtevtā wmtgU tUó Kti wmtgU Gi t-šš' cix¶v Kti tbqv thþZ cvþi |

(2) cKí KvþR cvbþhvM' cwb e'envi wbuōZ KiþZ nþe| tKvb Ae`vtZB tWvev, cKai ev j ebv³ cwb cKí KvþR e'envi Kiv hvte bv|

(3) gwi Pv cov GgGm iW wetkl Kti j ebv³Zvi KviþY gwi Pv aiv GgGm iW tKvb Ae`vtZB e'envi Kiv hvte bv|

(4) m'váj enþbi mgq AvZ mZKZvi m½ enb KiþZ nþe hvþZ Zv ¶wZMŌ -bv nq|

4| GZ`wētq wē`wi Z Rvbvi Rb' tmbvm`i, B Bb wŋi kvLv, cZ©cwi`Bi cĪ bs-1100/25/cwj w/B-11 Zvwi L 23 tg 2006 Gi gva`tg cKwvkZ Ōg'vtUwi qvj tUwós m'váj wbe¶Pb I tcō¶Yi bxwZgvj vŌŌ AbjmiY KiþZ nþe|

cwi wkó - 1
ḫμvocĪ - K
Avi AvB - 710/2008

m̄v̄új w̄m̄j s m̄w̄UcĪK̄U

GB gṭg^cĀ'vqb Kiv hvṭ"Q th, wbtæ enYZ ḫUwós m̄v̄új Avgvi ZĒyeavṭb msM̄h/cĪ'Z ceR
h_vh_fvṭe w̄m̄j M̄j v Kiv nṭj v t

μigK bṭ	Kg ^q bṭ Pw ³ cĪ bṭ	m̄v̄új i weeiY	msM̄h/Kwós Zwi L	gše"

ṭvb t XvKv ṭmbwbeim|

ṭḫi/- xxxxxx

Zwi L t ____ ṭg 2006 Bs|

wR B (Avg) cĪR± m̄D_, XvKv

m̄v̄uj ĀZix Ges tc̄t̄Yi w̄b̄ Rbv

μwgK	t̄Uw̄s m̄v̄uj Gi bvg	m̄v̄uj Gi weei Y	m̄v̄uj msL̄v/ cwi gvY	Xvj vB/ m̄v̄uj msM̄ni mgq	m̄v̄uj j̄v̄te tc̄t̄Yi mgq	j̄v̄te m̄v̄uj M̄t̄bi mgq	gšē
1	Kbw̄μU wm̄uj Ūvi	wg- w̄WRvBb (Mix design)	06 (0q) w̄U	cK̄t̄r̄ i Xvj vB īīi Kgc̄t̄ŋ 14 t̄P̄S̄ī) w̄ b c̄t̄ēŋ	wm̄uj Ūvi ĀZixi 4_ŋ̄ t̄b	c̄t̄Z Kvh̄ŋ etm 0730-1400 N̄w̄JKv, 1900-2100 N̄w̄JKv Ges mv̄B̄wn̄K/ mi Kvi x Q̄ȳŪi w̄ b 1900- 2100 N̄w̄JKv	j̄v̄te n̄t̄Z dj vdj c̄w̄Bi c̄t̄i cieZx̄ [®] Kvh̄ŋg kj̄ Kiv h̄t̄e
		cK̄t̄r̄ i w̄F̄w̄E Ges c̄t̄Z̄w̄ Ōv̄ Xvj vB̄t̄qi mgq ĀZixKZ wm̄uj Ūvi	c̄t̄Z t̄ŋ̄t̄Ā 06 (0q) w̄U K̄t̄i	Xvj vB KvR Pj vKvj xb ēēūZ gŪŋ Ōvi v wm̄uj Ūvi %Zix Ki t̄Z n̄t̄e	wm̄uj Ūvi %Zixi 4_ŋ̄ t̄b	-H-	
2	Gg Gm iW	cK̄t̄r̄ i ēēn̄t̄i i Rb̄ mv̄B̄t̄U AvbqYKZ j U n̄t̄Z īv̄bWg f̄v̄t̄e w̄bēŋ̄bKZ iW	c̄t̄Z Wvq wgUvi Gi Rb̄ 04 (Pri) w̄U K̄t̄i iW	cK̄t̄r̄ i ēēn̄v̄i / m̄sth̄v̄t̄Mi Kgc̄t̄ŋ 10 (̄k) w̄ b c̄t̄ēŋ	msM̄ni 02 (̄β) w̄ t̄bi ḡt̄ā	-H-	t̄Uō dj vdj c̄w̄Bi c̄t̄i Kv̄R ēēn̄v̄i Kiv h̄t̄e
3	ewj	cK̄t̄r̄ i ēēn̄t̄i i Rb̄ mv̄B̄t̄U AvbqYKZ ewj ī ēē n̄t̄Z msM̄pxZ ewj	c̄t̄Z ēē n̄t̄Z 2 (̄β) t̄K̄w̄R K̄t̄i	cK̄t̄r̄ i Kv̄t̄R ēēn̄v̄i i Kgc̄t̄ŋ 10 (̄k) w̄ b c̄t̄ēŋ	msM̄ni 02 (̄β) w̄ t̄bi ḡt̄ā	-H-	-H-

cvBj BwUwMÜU tUwós tgvkþbi cwi Pvj bv I
e`envfi i bwiZgvj v - 2008

eivZt

K| tmbvm`i, BBbwMöi kvLv, cZ`Cwi`Bi Pw³cÎ bs-BBbwM/89 Ae 2006-2007 Bs|

L| PIT Collector-User's Manual October 2005.

M| tmbvm`i, B Bb wMöi kvLv, cZ`Cwi`Bi cÎ bs 1100/31/B-11 ZwiL t 31 tg 2008
Bs|

fvgKv

1| BgviþZi wfwE GKwU „i“ZcY`Ask hvi Dci AeKvWvtgvi `vqxZKvj I wbi vcEv wbfP
Kþi| Mfxi wfwEi t¶tÎ cvBj BgviþZi GKwU tgsWj K Ask hv gwUi Mfxi m`úY`A`k`
Ae`vq wbgP Kiv nq| gwUi Mfxi cvBj wbgP Yi mgq Kv`v, cwmb, ewj I Ab`vb` A`k`gvb
Ac`è` cvBj Kwós Gi wFZþi cÖek Kþi cvBj þK`eþ I Î`wUcY`Kivi mþhM `vK| `eþ
I Î`wUcY`cvBj BgviþZi Rb` SþKcY`Ges AþbK mgq Bgvi Z tWþe wMþq eü Rvbgvtj i
¶wZ mwaZ nq| mZivs wbi vc` cvBj dvDþÜkb wbiwÖZ Kivi jþ¶` cvBj BwUwMÜU tUwós
AZxe cÖqvRb| cvBj BwUwMÜU tUwós tgvkþbi gva`tg mvaivbZt gwUi Mfxi A`k`gvb
cvBþj i wbgP Kvj xb eo aiþbi Î`wUmgþ thgb dvUj, cvBþj i AvKvi AvKwZi cwi eZÖ,
KwþLZ gv`vq cvBþj i `N` bv nl qv, AZ`š-wbggvþbi KswµU e`envi BZ`w` wbyq ceR
gvbm`sz cvBþj i e`envi wbiwÖZ Kiv hvq|

DþÍk`

2| cvBj BwUwMÜU tUwós tgvkþbi mwVK cwi Pvj bv I e`envi wewa m`úþK`mwVK w` K wþ` Rbv
cÖqb Kiv|

e`envi

3| cvBj BwUwMÜU tUwós tgvkþbi gva`tg gwUi Mfxi A`k`gvb cvBþj i wbgP Kvj xb eo
aiþbi Î`wUmgþ thgb dvUj, cvBþj i AvKvi AvKwZi cwi eZÖ, KwþLZ gv`vq cvBþj i `N`
bv nl qv, AZ`š-wbggvþbi KswµU e`envi BZ`w` wbyq ceR gvbm`sz cvBþj i e`envi wbiwÖZ
Kiv hvq|

cix¶vi wd

4| mk`zewnbxi Rb` th tKvb wbgP mvBþU b`bZg 10wU cvBþj i tUó Kvþrg m`úbe
KiþZ nþe G kþZ`cvBj BwUwMÜU tUþöi Rb` tgvkþwU wbgP mvBþU tcÖY Kiv nþe| cvBj
cix¶vi wd wþtgæ` qv nþj v t

μgK	GKB mvBtU cixŋvthvM ^o cvBtj i msL ^v	cixŋvi wd	gše ^o
1	10 wU	cŏZwU cvBj 1,500/- (GK nvRvi cŏPkZ) UvKv	1 tKvb wov ^o ō mvBtUi cvBj cixŋvi Rb ^o b ^o -bZg 10 wU cvBj wbeŋb KiŋZ nte
2	10 Gi AwAK	11-Zg cvBj t ^o -tK cŏZwU cvBj 1,000/- (GK nvRvi) UvKv	2 WwUv Kvŋj Kkb Gi Rb ^o I AvB wv (j ^o ve)/ Gml -3 (j ^o ve) mn 2 Rb WwUv Kvŋj ±itK wKv ^o vi KZŋ wR ^o -^ e ^o e ^o -vcbvq mvBtU Avbv tbqvi e ^o e ^o -v Kiŋe

mKj tUó wd cvBj tUtoi Pwn^o v cŋi i mŋ_ ōi AvB wv g^ovUvi qj tUós j^ove, tmbvm^o i, BBbmŏi kvLv, cZ^ocwi^o Bi, XvKv tmbwbevmŏi Gi AbKŋj e^ovsK Wcdw/tc-AWŋ Gi gva^otg Awŋg Rgv KiŋZ nte|

5| wov^o ō mvBtUi cvBj cixŋvi Rb^o m^oŋe^o ZwiL wbaŋY| wRB/^oZš;GwRBMŋyi cvBj tUtoi Pwn^o v cŋi i tŏŋŋZ Gml-3 (j^ove) I AvB wv j^ovtei mŋ_ mgšŋ ceŋ msŋkŏ mvBtUi cvBtj i WwUv msMŏni Rb^o m^oŋve^o ZwiL wbaŋY Kiŋeb|

6| cixŋvi Rb^o cvBj cŏZ KiY

K| cŏŋg cvBtj i gv^ov (Pile Head) tŋstM Zv nŋZ gwU, ewj , big KsqμU cŋŋZ AcmviY KiZt AwiwRbvj KsqμU ŋei KiŋZ nte |

L| cvBtj i gvSvgnS GjvKvq 2^oŋ^o-tK 3^o WvqwgUvŋi i ŋwU RvqMvq wPŋRj w^oŋg tKŋU gmb KiŋZ nte| GKŋU RvqMvq Accelerometer mŋthvRb Gi Rb^o Ges Ab^o RvqMvq Hammer ōviv AvNvZ Kivi Rb^o|

7| WwUv msMŋni Rb^o tgvkb (PIT) cŏZ KiY| WwUv msMŋ Kvhŋŋg wbtg^o avc mgrŋ h^ovh^o-fvŋe AbyniY KiŋZ nte

K| e^oenŋi i cŋe^oŋgvkbwU h^ovh^o-fvŋe PvR^oKiŋZ nte| GwU PvR^oŋŋZ AvbgyvbK 04-05 N^oUv mgq cŏqvRb nq| mvari bZt GKevi dj PvR^oKiŋj tgvkbwU 08 N^oUv e^oenŋi Kiv hvq|

L| mieivnKZ teë PIT Gi `ÿçvřkřmshy³ KiZt memgq Křta Sřj řq KvR KiřZ nře|

M| mieivnKZ Accelerometer, PIT řgřkřbi řcb Abřhvřx AwZ mřeavřb mshy³ KiřZ nře|

N| PIT Gi mBP Ab KiřZ nře Ges Contrast be Adjust KiZt Display Screen ř^Q KiřZ nře|

O| PIT eřenvřii mKj řbř`Rbv PIT Collection Gi UvP řřb (Touch Screen) Gi Dci cřk KiZt cřvb KiřZ nřq| Brv AZřš-ř^Q I řřkřvřzi nřqvi KviřY eřenvřii mgq cřvi³vi Avřj ev řřvřřř eřenvi KiřZ nře Ges mnbřx gřřvi ej cřqřM KiřZ nře| KLřbvB mřeřP 10 řmřKř Gi AwZřii³ mgq UvP řřb cřk Kři ati i vLv hřte bv řKbbv řmřřřř Zv Calibration Mode G Přj hřte|

P| Screen Gi Dci řřkřKiZt Main menu řZ řřřZ nře| Main Menu cřvbřZt 6řU Astk řeř³ Ges 6řU Astk DATE & TIME, PROJECT, UNITS, MODE, FOLDER BITMAP (Project Zřři Rbř) I PARAMETER MENU (Hammer Symbol) řřkřte| cřZřU menu -B ř^ eYřřx řeavř cřqřRb Abřhvřx Dřv eřenvi KiřZ nře|

Q| Project Menu Gi Dci Avřj řřiv Avj řZřvřřte řřkřKiZt cřkřři břg, řřKřPř³ břř cřřřZ Zř cřvb KiřZ nře|

R| MODE řgbyGi Dci řřkřKiZt memgqB Velocity Mode řbafřY KiřZ nře|

S| Unit řgbyGi Dci řřkřKiZt SI unit řbafřY KiřZ nře|

T| Hammer Diagram Gi Dci řřkřKiZt cvBřj i řeřřbæZř h_v Wave speed (WS) mřavibřZt 3500 řgřvi/řmřKř, cvBřj i řřN³ (bKkv Abřhvřx), Magnification Delay (MD) mřavibřZt cvBř řřřř 20%, cvBřj i řvřvřgřvi (bKkv Abřhvřx), AC Value mřavibřZt 17, AG Value mřavibřZt 08, 06řU řeřř I cvBř břř cřřřZ Zř mřřhvřb KiřZ nře| cieZř³cvBřj i řřřřř křřřřř cvBř břř cřvb KiřZ nře hř Dcřiv³ Zř D³ cvBřj i řřřřř GKB Ařř Abjřc nřq|

8| WřUv mřMř

K| WřUv mřMřni Rbř řgřkb (PIT) cřřZ Kivi ci cvBřj i gřřvřgřS GKřU gřř RvřMři Dcři Accelerometer Gi břřP mieivnKZ řgřv j řřMřq mřřvřři řřřc aiřZ nře|

L| Aci gmY RvqMvi Dci Hammer Øviv AvNvZ KiþZ nte| n'vgvi Øviv AvNvtZi mgq Accelerometer mþRvti cvBþj i mstþM tþtc aþi ivLþZ nte| Gfvþe 6 evi n'vgvi tev-Gi gva'tg 6 wU WvUv msMþh KiþZ nte|

M| cØZevi n'vgvi Øviv AvNvtZi mstþM GKwU Graph þ`Lv hþe Ges Zvi Dci GKwU AG Value c'wkwZ nte| mvari bZt D³ Value 1 nþZ 128 chS-nq| Zþe fiv djvdþj i Rb" D³ Value 30 t_þK 70 nþZ nte| ZvB n'vgvi Øviv AvNvtZi ci 6wU Graph Gi cØZvUv AG Value 30 t_þK 70 Gi gþa" þ`Lv tMþj OK þevZvg tþtc D³ WvUv msMþh KiþZ nte|

N| 6 wU WvUvi gþa" AþBK þjv WvUv Lvivc nþj (30 t_þK 70 Gi evBþi) CLR þevZvg tþtc Avevi bZb Kþi "i" KiþZ nte A_ev tKvb GKwU WvUv Lvivc nþj Arrow Key (þ`þ) Gi gva'tg Y/N þevZvg tþtc D³ WvUv Mo t_þK Acmvi Y KiZt bZb WvUv vbþZ nte| 6wU mwWK WvUv msMþni ci OK evUv Pvc t`qv nþj GKwU Mo WvUv tgvkþbi tggixþZ msMþixZ _vKþe|

9| WvUv wþkþY I djvdj `Zix | GgBGm g'vtUvi qvj tUw³ j `veþi Uixi mwnZ msuké Gml-3 (j`ve) Ges I AvB w³ (j`ve) wdi t_þK cØB WvUv Standard Software Gi gva'tg wþkþY KiZt djvdj `Zix Kiþe| WvUv wþkþþYi Rb" vbþgwe³ avc mgn AbmiY KiþZ nte t

K| cØþgB cvBj BwUwUwU tUw³ tgvkþbi mvt_ mieivnKZ Operational and Test Interpretation Training Manual I Software Manual Gi tmKkb 3 I 6 fiv þvþe Study KiZt vel qwU AvqþE AvbþZ nte|

L| Pile Integrity Test (PIT) tgvkþbi mstþM mshþ³ Flash Card t_þK KwúDUvi G WvUv Save KiZt PDI Standard Software (PIT-W) Gi gva'tg D³ WvUv Analysis KiþZ nte|

M| WvUv wþkþþYi mgq wvrfbwFilter Parameters e`envi KiZt djvdj mþúþK© mg`K avibv vbþZ nte| vbþgweFilter Parameter mgþni msvþþB eYþv cØvb Kiv nþj vt

(1) **MA (Magnification).** mvari bZt Toe Singal þK AwakZi `^Q Kivi Rb" e`envi Kiv nh Ges Gi Value mvari bZt 1 t_þK 30 Gi gþa" e`envi Kiv nq|

(2) **WS (Wave Speed).** WvUv msMþni mgqB Gi Value cØvb KiþZ nq | KswþþUv Rb" 3000 wglv/þmþKÜ nþZ 4000 wglv/þmþKÜ nq Ges Gi Value mvari bZt 3500 wglv/þmþKÜ wetePbv Kiv nq|

(3) **LE (Pile Length).** WvUv msMñni mgqB bKkv Abjhvqx Gi Value cðvb
KiþZ nte|

(4) **LO (Low Pass).** Signal Data þK kw³kyj x Kivi Rb" e"envi Kiv
nq Ges Brv High Frequency Noise þK `þxfZ Kti | mvavibZt Gi
MðbþhvM"gvb $O \geq 3.2$ wglvi, Zte fvj djvdþj i Rb" 1 wglvi wetePbv Kiv
thþZ cvti |

(5) **HI (Hi Pass).** Signal Data þK kw³kyj x Kivi Rb" e"envi Kiv nq
Ges Soil Resistance Gi KviþY th mg" - ¶iz Noise ^Zix nq Zv `þxfZ
Kti | Gi gvb cvBþj i ^^N"¶ KþqK_y t`qv thþZ cvti | Zte 50 wglvi ev Zvi
tekr w þj fvj djvdj cvl qv hvq|

Dctiv³ c"viwglvi mgn e"envi Kti cðwkZ Curve, PIT þgnkbwU
User's Manual G emYZ Guide Line Gi wfvEþZ weteKþY Kti djvdj %Zix
KiþZ nte|

10| cvBj BwUvMñU tUtóí mæveXZv|

K| cix¶lvi gra"tg cðB cvBþj i ^^N"¶cKZ ^^N¶ tPtq 5% Kg ev tekr nþZ
cvti |

L| cvBþj eo aiþbi tKvb dvUj ev msthvM _vKþj D³ dvUj ev msthvM "þj i
Mfxþi i tKvb Z_" wby¶ Kiv mæe bq|

M| cvBþj i AvKwZþZ nVvr tKvb cwi eZþ nj Zv mnþRB mbv³ Kiv mæe| wKš'
axþi axþi avivevnnKfvte cvBþj i AvKwZi cwi eZþ nj Zv mbv³ Kiv Kómva"

N| cvBþj i PZw ¶Ki Soil Properties Lp fvj nþj mybw" ¶ fvte Pile Toe
mbv³ Kiv Kómva" nþq cto| dþj cvBþj i mñVK ^^N"¶wby¶ KiþZ Amþeav nq|

O| KswþþU ga" w þq cðvnnZ Wave Speed KswþþU Properties Gi Dci
wbf¶ Kti | þþnZi GK GK mvBþU KswþþU Properties GK GK iKg, ZvB
cix¶lvi Rb" mybw" ¶ tKvb Wave Speed Abyni Y Kiv mæe bq| Zte mvavi Y gvþbi
KswþþU Rb" PIT þgnkbwU User Manual Gi Guide Line Gi wfvEþZ
Wave Speed 3500 m/s aþi wbtq Test Kvþþg Kiv hy³hy³ | dþj G cix¶lvi
gra"tg cðB cvBþj i ^^N"¶ e"vcvþi mþúo tKvb wmxvtš-tcðvþbv AþbKuv Abgvb
wbf¶ Ges mæúY¶el qwU Test KvþR wbtqvRZ Engineer Gi AwfÁZv I `¶Zvi
Dci wbf¶Kxj |

P| fvj djvdłj i Rb" cvBłj i WvqwgUvi ^`N^ 1 `kgvstki Kg nłZ nte Ges
cvBłj i ^`N^WvqwgUvłj i 30 _Y Gi gta" młgve× _vKłZ nte|

hZad i qlyteqly

11| G tğukbwU e"envłj i mgq wbtgme³ wel tq h_vh_ mZKZv Aej *b KiłZ nte t

K| tğukbwU cwb cłZłivax bv nl qvq tKvb μtgB cmbi ms`útk^Avbv hvte bv|

L| tğukbwU e"envłj i mgq `łcvtkłteè msthvM KiZt Kłtai mstM Słj tq e"envi
KiłZ nte hvłZ tKvb μtgB nvZ ł_łK cto bv hvq|

M| GwU e"envłj i MłhbłhvM" Zvcgvłv 0°- 40° tmj wmqvm| ZvB AwZwi ³ tKvb Mig
`vłb ev młhP Zvłc `xN^mgq tğukbwU i vLv hvte bv|

N| tğukbwU e"envłj i mKj wbt`Rbv UvP `łb (Touch Screen) Gi Dci cł KiZt
cłvb KiłZ nq| UvP `łb (Touch Screen) AZ`š-`^0 l `úkRvZi nl qvi Kviłb
Dnv e"envłj i mgq cwi[®]vi Avłj ev tMvłn e"envi KiłZ nte Ges mnbxq gvłvi ej
cłqvm KiłZ nte hvłZ AwZwi ³ Pvłc UvP `łb (Touch Screen) qłwZMł-bv nq|

O| tğukbwU i e"vUvix PvłRP Rb" 100-220 łfvè Gi Gvm cvl qvi jvBb e"envi
KiłZ nte|

12| GZ`wel tq we`wii Z Rvbvi Rb" łmbvm`i, B Bb wmlı kvLv, cZ^cwi`Bi cł bs-
1100/31/B-11 Zwi L 31 łg 2008 Gi gva"łg cłvukZ łcvBj BıwUwMłU tUwłs tğukb
cwi Pvj bv l e"envłj i bwxZgvj v - 2008łł Abmi Y KiłZ nte|

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